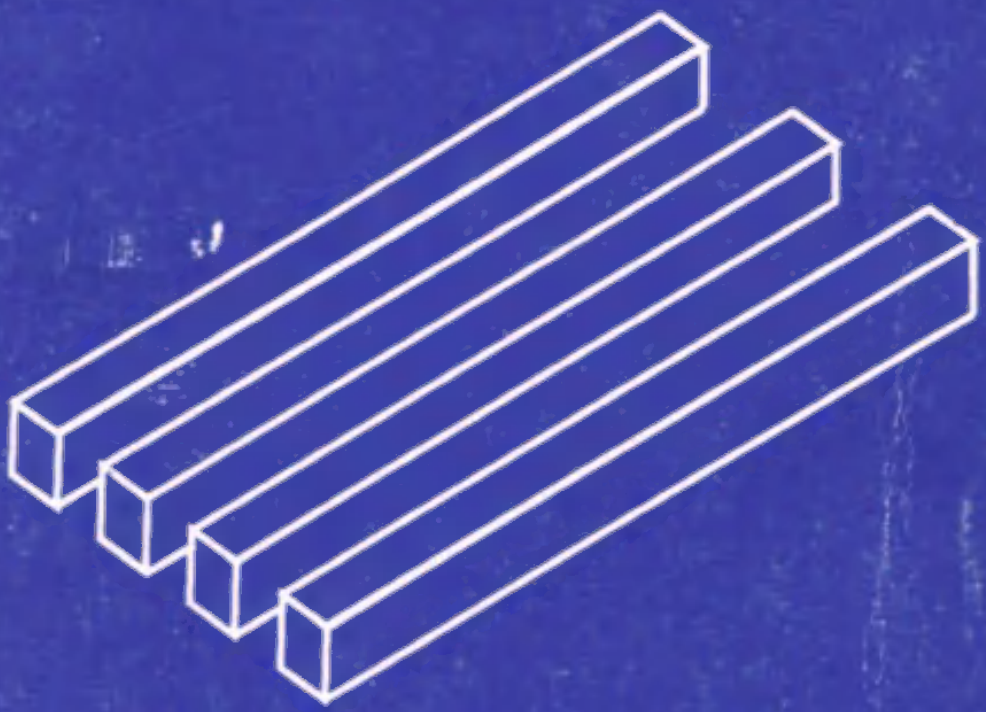
FLORIN VASILIU

PARADOXISM'S MAIN ROOTS



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essay
Translated from Romanian by Ştefan Benea

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Introduction

In the year 1983 issued at Fès in Morocco the volume of poems *Le sens du non-sens* (Edit. Express) by the young Romanian mathematician and poet Florentin Smarandache. The author taught mathematics between the years 1982-1984 at "Sidi El Hasan Lyoushi" College in Séfrou based on a contract between Romania and Morocco. The book contains a nonconformist manifesto for "a new literary movement: The Paradoxism".

No doubt it is a connection among the title of book, the inner poems and the content of this programmatic manifesto of a literary movement entitled explosibly "paradoxistic". A look-in through the poems makes a strange feeling like an invisible hand troubling the spirit: **"Rain's fingers beat the windows / No more can I sing / The words are unbearable / no more flower / no more car / no more oxen cart"**. (*Cântând în ploaie*), or: **"It is hard to me to be a common man / I exist against me / My heart became a part of my brain / the forehead has the diameter / of the sky..."** (*Exist împotriva mea*), or: **"The poet lights a candle / in his skull / and it burns, it burns there / with flame / Through his eyes two sparrows / take out their little beaks"** (*Cuvintele trecute prin foc*), and more: **"The men have got me out, got me away / than got me out from outside... The wind blows down the letters from the newspapers // «I'm running after the kid's shout / so fast that my ears enter inside me»/** (*Eu, Prometeul*).

It isn't hard to find in these "non-senses" the ciphered "sense" of an upset destiny "drove away" into a devastating "out of outside" without horizons and heaven. There, where supreme god and demiurge is only the paradox. Therefore aren't surprising some ideas from the above mentioned manifesto like: "Much more a book with baren pages is valuable than one of nothing saying" a premise for claims like: "Don't impose me literary rules", "I allow me any boldness: antiliterature and his literature, the style of non-style, poems without verses (because the poems don't want to tell words); mute poems (told) with high voice, poems without poems (because the notion "poem" does agree with none a single definition to be found in dictionaries and encyclopaedia), poems existing by absence, poems without words... non-intelligible intelligent language... translation of the impossible into possible or transformation of the abnormal into normal... Because the art is not for mind but for the heart. Because the art is for mind too. And try to interpret what you can't interpret! Your imagination can blossom like a cactus in a desert land."

The literature of our century was troubled by numerous currents, movements and literary schools. The appearance of a new colored "stone" into the mozaical décor of contemporary literary puzzle compels an analysis intended to indentify the specific features of movement, the difference in colour and shade against those to be found on the world stage as well as the relationship and conexion with these features, but especially to find the very substance, the paradox, and the forms and modalities in which it appears in the literary world, a courageous investigation, which this study dares to tackle only in part, between its proposed limits.

Therefore, who is the author of this new current? What is The Paradoxist Literary Movement?

Florentin Smarandache born in 1954 at Bălceşti-Vîlcea in Romania a graduated (first promoted) in mathematics at the University Craiova (1979) begun his profession as a programmer at Heavy Machine Enterprise in Craiova (1979-1981), than he passed in the educational activity. At first teacher in the secondary school in Bălceşti (1981-1982), than in Morocco (1982-1984) he becomes professor at "Nicolae Bălcescu" College in Craiova (1984-1985), than the line of his profession declines to the situation of a math teacher at the school in Drăgoteşti-Dolj (1985-1986), followed by his expulsion from the public education system, jobless, as tutor for pupils and students (1986-1988). Like that is how in only ten years the professional activity of an intellectual ends in an unemployed worker during "the

golden epoch", an unjust colapse that the future will not validade.

The professor prepared himself for a well grounded profession. Two reports intended for the mathematics congresses from California and Canada are forbidden to leave the country. Some volumes of poems are refused to be published. Nonconformist, he showed his discontent frankly towards the regime which was hindering the assertion of his knowledge, aptitudes and vocation. He will be eliminated from the educational activity. He is too young to accept this status and to resign, and finally in 1988 he crossed border illegaly to reach Turkey, where he lives precariously, a life of selfexiled, After an year and half he reached U.S.A. (1990) where from the beginning was a professor, than he enroled as doctorant in mathematics at the University Tempe in Arizona state and so far he works as research engineer at Honeywell Computer Co. Inc. in Phoenix, Arizona. His wife and two children arrived in America in 1991 too.

Florentin Smarandache came to the fore in the mathematics domain with four works published in Romania, Morocco, U.S.A., and over forty reports printed in mathematics reviews from Romania, Germany, Holland, Swiss, Canada, U.S.A. He is active with works in diverse national and international activities in Craiova and Iassy (Romania,1978), Calgari (Canada,1986), Berkeley (USA, 1986), Los Angeles (USA,1989), Las Cruces (Mexic,1989). He is the author of the so-called Smarandache function from the theory of numbers: [$\eta: Z^* \to N$, $\eta(n)$ is the smallest integer such that m! is divisible by n], included (as the most his important work) in dictionaries, antologies and scientific enciclopedias from Great Britain, Germany, France, Spain, U.S.A. He is a feilow of the Mathematics Association in Romania (1980) and of the American Mathematics Society (1985).

În 1979 he makes his début in the Romanian review *Năzuinţe* with a poem entitled "The figures have begun to vibrate", than he continues to publish poems in various literary magazines from Romania. În 1980 together with a group of young writers launches "the paradoxist literary movement". The editorial début was the volume of poems *Formule pentru spirit* / Formulae for spirit, Bucharest, Editura Litera, 1981. In 1983 this volume was translated in French by Chantal Signoret from the University of Provence. The French translation entlited *Formules pour l'ésprit* with the preface "État-de-moi" (Status of me) under the name of the Romanian poet Ion Pachia Tatomirescu from Timisoara, issued in the same year at Express Printing House from Fès in Morocco. It followed *Culegere de exerciţii poetice* (Collection of poetic exercises), *Sentimente fabricate în laborator* (Laboratory performed sentiments), and *Legi de compoziţie internă. Poeme cu probleme* (Laws of internal composition. Poems with problems) all these works, written in Romanian language, issued at Fès in Morocco in 1982. Than followed some books with poems in the French language: *Le sens du non-sens* Fès, Morocco, 1983 from which we have cited some excerpts just in the above beginning lines, *Antichambres et antipoésies ou bizarreries*, Fès, Morocco and *Le Paradoxisme: un nouveau mouvement littéraire*, Bergerac (France, 1992). Also in the same year issued two books of poetry in English language *Circles of light* and *Dark Snow*, in Erhus University Press, Chicago, and *America, paradisul diavolului* (America, devil's paradise), an emigrant diary, in Aius Printing House, Craiova. The most works were translated in full or in part in English, Spanish, French, Portuguese, some of them at the third edition in U.S.A. The poet contributes to literary reviews from Romania, France, Belgium, Turkey, India, Japan, Germany, Canada, Australia, Morocco, U.S.A.

He was honoured with literary rewards in Romania (1981, 1982) France (1990), The Special Reward for Foreigners at the 9th Great Rewards of Bergerac town (France, 1990); he was proclaimed as International Eminent Poet by the International Academy of Poets from Madras (India, 1991) and won the Honorific Diploma for Fantasy Poetry at the competition of The Literary and Art Academy from Périgord (France, 1992). His poetry was selected in nine literary antologies issued in Craiova (1980), Caen, Puymeras, Paris, Bordeaux (1989, 1990, 1991) New York, Colorado (1991, 1992), Seul (1991). The play entitled *Out in left field*

was performed on a stage in Phoenix (U.S.A.). Two emigration diaries of over thousand pages, three plays for children and other hundreds manuscripts of poems are on the way towards the editorial offices of some publishing houses or entered the printing. Recently at HAIKU Publishing House in Bucharest was finished the translation in French and English of the haiku poems and of our preface for the threelingual volume entitled *Clopotul Tăcerii* (The Bell of Silence) processed in Bucharest and intended to be multiplied in Phoenix, U.S.A.

Florentin Smarandache has accomplished four decades of existence from which the last two ones with shortly above mentioned scientific and literary survey. His poetry and prose have a large echo in many book-reviews, papers, broadcasting and mail letters. As regarding his poetry, Claude Roy from Collège Jean Moulin claims: "Would you play words, thronging them, matching them, hiding them is like to launch at carnaval a serpentine which would develope the logic until to absurdity... from the ink-pot to the philosopher's pen" (excerpt from the preface to the plaque *Antichambres, antipoésies, bizarreries*, Inter-Noréal, Caen, France (1989, p. 3). And the French Reverend Gheorghe Calciu writes "... it's likely enough you aren't an occasional poet and that you really have a sacred fire in your vein what oblige us to call you poet" (from the letter to the poet from 18 July 1989 regarding the plaque *Antichambres*...)

The book *America, paradisul diavolului* (America, devil's paradise), an emigrant diary, includes the period from 23rd October 1990 when leaved Turkey until 3rd September 1991, length of time he spent in U.S.A. It's a severe and intrasigent radiography of the living space whom he carefully watched after he experienced the totalitarisme regime, revealing life events, a concrete reality, in which exists the shocking, paradoxal style, deprived of analyses and introspection, all expressed in a fluent language, short sentence, written with nerve and confidence remembering the Hemmingway's style. As regards this work the Romanian literary professor Ion Rotaru from the University in Bucharest wrote: "The Romanian language in its full expresivity is in the nib of his pen. The Oltenian and the peasant of his innermost depth of spirit sometimes burst enchating in the light among so much sarcasms and word games of the estranged, small at the start of his way, Panait Istrate". (Realitatea Românească, Saturday 8th September 1990). And the book catalogue to be issued of "Victor Frunză" Publishing House wrote about *Fugit... Jurnal de lagăr din Turcia* the following: "The young writer Florentin Smarandache ran away from his country from something just else reasons than those of others: to reach his ideal to become writer because at home the publication of his works were systematicaly refused. He had to pass through the purgatory of refugee camps in order to comply with his ideal, likewise a paradox : his first book of wide scope issued in homeland yet. During the reading the readers will experience not a few shocking elements due to the novelty of life problems and last but not least through a sometimes «uncontrolled» language, itself characteristic for the life of these nobody's men".

As regards The Paradoxist Literary Movement, whose recognized leader just from its establishment is Florentin Smarandache, it has the spring into The Manifesto published in 1983 whose basical ideas were quoted above. These ideas express THE NEGATION and in point of paradoxism view they have as ideatic substratum thesis and conception neighbouring those of some modern literary currents which are directed on the troden ways of the negation and vanguard's absurdity. The suprarealism, for instance, – which pulls out out the substance from the Pablo Picasso and George Braque's cubism, from the cult of creative unconsciousness of Marinetti, Hlebnicov and C. Govoni's futurism, from the negation of any relation between think and expresion, a thesis supported by the dadaists headed by the Romanians Tristan Tzara and R. Huelsenbek - in fact representing a modern nihilism, consistently uses "the psychic automation and thinking dictation in the absence of any control of the thinking" (Jacques Gaucheron). This curent, asserted at the beginning of century by André Breton - especially by his manifestos - and by the brilliant characters like Robert Desnos, Antonin Artaud, Louis Aragon and Paul Eluard, will have a large echo overall

in the world stimulating currents, schools and poets without some adhesion at some poetic catechism. His echo in Romania will be felt amidst the poets like Ilarie Voronca, C. Nisipeanu, Miron Radu Paraschivescu, B. Fundoianu, Ion Vinea, Saşa Pană, Stefan Roll, Geo Bogza and others.

After the last World War the Occident is assailed by the neovanguard, postmodernism, experimentalism and numerous new schools as well by the Izidor Isou's letrism - again a Romanian - neodada and others. In Romania is not absent the team of poets of the new currents: Gherasim Luca Trost - the creator of the oniromancy, Paul Păun, Ion Caraion, Virgil Teodorescu are only a few among the many who will be present on the barricade of the new poetry. In this order Aurel Dragoş Munteanu will write that "Compared with the big centers of the world Bucharest is after 1945 the most fertile center of artistic experiences and, I dare to say, the most orthodox" (1).

But returning to the paradoxism, it must make a specification. If this movement frequently uses in the text of his Manifesto avowdly the emblematic NON, if the negation appears in the conception of this movement, his essence is based however on the paradox and his connotations. In "The Nonconformist Manifesto" published in the volume of poems *Le sens du non sens* (1983) Florentin Smarandache shows some of paradoxism's mechanismes: excesive contradictions, strong antithesises, figurative expressions interpreted in a personal way, the semantic transformations, opposite comparisons etc. As you can see the arsenal of the poetic means announced by the head of the literary movement will be useful for the understanding paradoxism not so much in the negation domain, but in creating the antithesis, the antinomy carried up to paradox. It is what he makes in his poems: "... The streets are full of vacancies / The life is death too // I'm the master of the all / what doesn't exist. / I live in my outside. // The wind pull the grass / by locks / On the garbage box / the rain is cat // I give some sordid verses for washing // This time is my non-time (*De culoarea plânsului*). Because for Florentin Smarandache"... These poems / high as a dream / with the body / green like the life / with white eyes / like the hopes / and black like the grief / from the word / sweet like the fondness / and bitter like the love..." (*Dincolo de cuvânt*), "...blue verses like the hour / and mild like the timidity, / by the silence attacked / and by the shouts conquerted, / with white spring murmurs / or night soot" (*Înainte de cuvânt*), represents an epitaph for the paradoxism, like "De la musique avant tout chose..." of Verlaine, was the song of symbolism's birth.

Reporting on the paradoxist literary movement the literary critic Constantin M. Popa confirms again the possibility to enlarge the literature by antinomic and paradoxal concepts. "The paradoxism doesn't look for to destroy the literature. It is concerned to find a new scriptural practice, efficient and full of stress, preserving the obtained energy from the impact of the opposite semantic fields. The clash will be always unforeseeable (...) The negation's paradigme becomes literary object because all is falling in literature anew. It is an inevitable paradox..."

Therefore the paradox is "... the faith that, into the poet's space, can enter anything (...) a literature that is «wipped» as far as is written (...) the paradoxists expressing lucidly the tragic results of the language discrimination" (*Mişcarea literară progresistă*, Xiquan Publishing House, Phoenix-Chicago, USA, 1992).

The verisimilitude of this reality is demonstrated by the way the movement has been perceived by the responsible factors of the literary world. Claude Roy writes in the *Noréal* review: "The filliation with the suprarealism is striking just from the beginning - inheriting from Prévert much more than from Breton. But this is only a family air. Here, the play is to demonstrate the magic and to stimulate the words in all their directions. So e.g. «the signed agreement resulted in a disagreement» and «the crew lost North selling Southwards»" (*Noréal*, 83, 28.9'91, Caen, France).

The well-known Spanish esseist Al. Ciorănescu, a native of Romania, sent to the poet

two letters regarding his poems and the paradoxist literary movement, one of these letters published in *Ramuri* (1-2/January-February 1992), saying: "...you propagate this new AIDS (...) only in absence what I think it is very smart. Otherwise also very correct and skilful. The paradoxism being an opposition to the usually faith, you, push the paradoxism towards an acquaintance taking of readers just in order you could remain paradoxal. Namely, you want to get us in order to lose us; and afterwards? You lost me not, but you astounded me. What does hinder me to thank you for The Paradoxist Literary Movement or non -" ... "If the name of «paradoxism» is your own, it seems to me that the sensibility expressed here is deeply Romanian. I think now at a poet like Geo Dumitrescu... I am wrong?" (Pierre Calderon, poet Istanbul, Turkey, letter from 25th May 1992 towards the poet).

That the paradoxism exists as an apart literary vein into the jungle of literary currents of the vanguard is demonstrated by the existence of an *avant la lettre* "paradoxism". The literary critic C.M. Popa shows "... the paradoxism was present before the paradoxist movement would have had a statute" (op.cit). The series of paradoxist poets have been set up - in conformity with the same author - by Urmuz, Mihail Cozma (Claude Sernet) a Marinetti's friend, Geo Bogza, Taşcu Gheorghiu, Gellu Naum, Nichita Stănescu, Marin Sorescu. At that the poet Ion Pachia Tatomirescu in the chronicle at the book of the critic C.M. Popa issued in *Renaşterea Bănăţeană* (717, 9th July 1992, p. 9) adds Leonid Dimov, Vintilă Ivănceanu, Emil Brumaru and others. At these we should add at least Şerban Foarţă who came in mind in this moment and more some others if we should stay to reflect a little.

Florentin Smarandache doesn't launch The Paradoxist Literary Movement by publishing a simple manifesto. He brings about into the patrimony of the movement, just in the moment when he gave its first impulse, three volumes of poetry which conquered the literary circles all-around. It was necessary a new circulation and today Florentin Smarandache is much more known in France, Belgium, Canada, Spain than in his own country. As regarding The Paradoxist Movement it has representatives in Romania too and not a few ones, but they are surpassed as number of people by those who exist and write in countries like; France, Great Britain, Belgium, Germany, Canada, Poland, Spain, USA, Brazil, Camerun, Russia, Morocco.

In these starting three volumes *Non poeme, Formule pentru spirit, Sensul non-sensului* - and not only, we can say - there are cultivated everywhere the contradiction, the shock of matching, the contrasts, the oxymoron, the paradoxism in a poetry of great sensibility ."La naşterea unui deces" (At a decease's birth), "Politeţe obraznică" (Naughty politeness), "Înălţimea unei căderi" (The height of a fall), "Practica teoriei" (Practice of theory), "Mic dejun format din iluzii" (Breakfast composed from illusions), "Poem indigest despre digestie" (Indigestible poem about digestion) are titles of some poems with a surprising content, whose reading creates "perplexity, shock and undecision" and "you makes the brain vibrate" as expressed by Robert Chasseneuil membre de l'Art et Poésie de Touraine, France. But definitely, about the paradoxistic poetry of Florentin Smarandache, it'll come back at the final of this work, in there where the circle of the literary creation will be closed from a certain zone of the paradoxism, to which we foresee a bright opening.

As we gave the answers, otherwise shortly, to the questions posed at the beginning as regarding the paradoxist literary movement and about the man who is in its head, it is proper to approach the paradox in respect of logic, philosophy, science, as it has been modelled and modelled anew in the course of time, on the edge of paradox occuring a lot of tragic experiences of the mankind in what we have been accustomed to name history.

The evolution of paradox in the passage of time

The paradox we can meet everywhere in nature, in the surrounding world, in the social events, in the life and in our thought, not to take into account if it is matter of its logical constructions, of literature or philosophy. Considered not for long ago as a state of exception, a deviation to rules, a place out of normal, the paradox penetrated the territory of the daily life being more and more close to us. Oftentimes we feel its presence in just the circulating system of the natural. So far it seems to us paradoxal even a title like *Bunul simţ ca paradox* (Common sense as paradox) to be found no long before in bookshops.

The paradox, unfailingly in the world of phenomena, falls under the incidence of science. Even the science history is a continuous collation with the paradox, being considered as the history of the appearance of some paradoxes and of their transformation in common truths. The Romanian profesor Grigore C. Moisil wrote three decades ago that "an idea occurs to be a paradox, than continues to be a banality and ends to be a prejudice..." And the Romanian philosopher Stefan Lupasco goes more far trying to legitimate the paradox as the fundamental modality of the reality. Indeed would be a plain coincidence Cocteau's idea that "paradox is a cloth used by the truth to spring out in the light in order to avoid an indecent walk among the people?"

As term the word *paradox* arises from the greek word paradox composed from para=agains and doxa=opinion being defined in Larousse dictionary as "opposite opinion to common belief". The paradox was explained in different sorts with connotations like joke, difference, accident, opposition, anomaly, error, antithesis, funny situation, contrast, incredibility, absurdity, contradiction, antinomy. Not a few times the joke is tasted as an effect of a paradox situation; the assertion "A jest's prosperity lies in the ear / Of him that heareth it, never in the tongue / Of him that makes it" (Shakespeare) seems to strengthen our opinion. The distinction or the difference as lack of resemblance between two or more beings or things can be met with the paradox more frequent than it say us the dictionaries. When Montaigne upholds that "The world is only variety and distinction" the window opened by such a thinking gives us light on the side of the sky where shines the star of paradox. The contradiction appears like two notions, reasons, conclusions which mutually exclude themselves. "We are in search of what is running away of us and we run after what is in search of us" we find in *Jurnalul ultim* (Last diary) of the Swiss writer Amiel (1821-1881). The opposition indicates a superior stage of contradiction, the stage in which the contraries are oposed so that the acceptance of one of them leads compulsory to the rejection of the other. "Where lives a Brutus must die a Caesar" we can hear singing in night going through the forest, after the thieves were asleep, their captain Karl in the play *Die Räuber* by Schiller. "Because the fire and the water can't stand together." (I. Berg)

The antithesis is an opposition, in the same time a stylistic figure based on the opposition too, amidst two ideas, expressions, reasons, phenomena, situations, characters which reciprocally set oneself in relief as in the following example: "Nature is great into small things". *The contrast* is a strong opposition, a striking one, bringing to light the degrees and the forms, the limits of situations, deeds and ideas. Ferdinand, son of king Alonso, from *The Tempest* by Shakespeare, begins his monologue in act III saying:

"There be some sports are paintful, and their labour
Delight in them sets off; some kind of baseness
Are nobly undergone, and most poor matters
Point to richends..."

As regarding *the antinomy*, this is a contradiction, apparently insoluble between two theses, laws or philosophic principles which reciprocally exclude themselves and which can be demonstrated every in part. As an example we can cite the famous Kant's four antinomies reffering to quantity, quality, relation and modality (*see Kritik der reinen Vernuft*).

The paradox - "this vice/passion of the thinking" as named by the philosopher Kirkegaard - is not so far away from the above mentioned terms, moreover it feeds itself from their substance. Because the paradox is based on antinomy, on contradiction, on opposition, all these come in a deadlock of reason. Without to forget - according to Hegel's confession - that the philosophy is "the overturned world", the paradox appears in this point of view as a contradiction to which the abstract reason comes in certain conditions. The natural logic - and the common feeling - theorized by Aristotle over two thousand years ago was based on the contradiction - a statement can't be true together with its negation, respectively can't be simulaneously true and false - and on the principle of excluded middle - every logical proposition is - in the frame of the system - or acceptable or rejected, a third possibily doesn't exist. But the paradox is situated exactly here, because it is a proposition which is in the same time true and false. As they can see the paradox is the strange situation in which is to be found a contradiction entered by logical way into a rational blind alley where the thinking process fells to be blockaded and powerless.

In front of this impressive incapacity the philosophers asked themselves all over the entire history if the responsible for this deadlock is only the thinking or the outside, that feeds the antinomies with its elements and phenomena. The antics, represented by the celebrated Eleatic School, ascribed to the outside the cause and the explaination of the paradoxes thinking the phenomenal universe as an appearance which must be considered in the practice, in the relation people/world-but which in the condition of the man trying to reach the essence of things is proved to be deceptive, the deep reality, transcendental, out of the apparent world of phenomena being expressed antinomically. On an apposite position of this thesis placed himself Kant who considered that the reason faces unsurmountable difficulties, striking itself in certain domains with insoluble problems. For instance, if into the plane of the immediate sensible reality the reason's solutions are pertinent and efficient, in the zone of the own reality, "das Ding an sich", the reason loses its way in contradictions, birth of antinomies and mires into the paradox. Still exists also the position of modern philosophers facing the logic and mathematical paradoxes like $\sqrt{-1}$ and others which will be analysed in the following pages.

However, the logic antinomies didn't come to a halt neither the thinking nor the algebraic paradoxes, didn't hinder the development of mathematics. This is true because the philosophers as well as the logicians and mathematicians focused their efforts to find the solutions to solve the paradoxes. For instance it is known that any positive or negative algebraic value raised at the second power has as result a positive number. However, $(\sqrt{-1})^2 = -1$, and this is a paradox. So appeared into algebra the class of imaginary numbers ($\sqrt{-1} = i$; $(\sqrt{-1})^2 = i^2$) which solved the paradox, but represented a step ahead in mathematics. Analogously it was created the type theory by the English logician Bertrand Russell (1872-1970) in collaboration with A.N. Whitehead (1861-1947), a theory operating in the field of logical paradoxes. The type theory resorts to the concept classes - analogous to the class of imaginary numbers from algebra -, namely the *types of notions*, strictly limited, unmistakable, introducing a *discontinuity*, a *typification*, the operation in one type of notions or other one being carried out on the basis of definitions which make disctinction so that only their non-observance could determine the appearance of paradox. Though the type theory is considered as deprived of "logical support" (2) it is accepted by the majority of logicians and mathematicians who don't ask the question "if the theory of types or of language levels is true". This theory contains a packet of "restrictions to the formation rules and therefore they are conventions introduced in order to make our language coherent" (3).

In order to understand "the logic of paradox" we consider useful to call for help the knowledge of the main pieces of this "style of figure" which provoqued numerous disputes and for which a good deal of ink both for writing and printing was wasted away.

The paradox in Antiquity

There's no knowing exactly who had the precedence in the history to open the door towards the domain of paradoxism. Up to that moment, which we shall disclose in the following, Greece was the owner of a patrimony of fundamental philosophic values. The Ionic School of Miletus (7th - 6th cen.A.C.) discovers the cosmos, the nature's order, setting at the origin of the world the primordial principle of the infinite, *apeiron* - the infinite and indefinite matter (Anaximandrus), The Pythagoras' School (580- 500 A.C.) adds the numbers and their resulting proportions and Heraclitus of Efesus (about 530-470 A.C.) introduces the ideas of changes, unity, truth and armony of contraries which he named logos.

Parmenides (end of 6th - 5th cen A.C.) is the headmost representative of Eleatic philosophic school. He shows somewhere in the eighth fragment of his poem "About the nature" that

"Nor tongue will dare to draw out a source from nothingness;
The word and the think reject to believe that could this be.
It must that evermore or not at all wouldn't be.

The mind in vain will look for ever to bear from creature
Something else than creature. Therefore the fate to-day
Didn't release yet from the chain neither birth nor death,
The existence or is or isn't: this is the verdict."

The acknowledgement of the existence accompanied by the negation of non- existence is the single way which can bring near the truth,

"Because only the one and the same can be thought to exist too"

doesn't mean something else - after the remark of Léon Robin (4) - than "the first and the great discovery of principle of contradiction (...) as a necessity of the thinking to choose between a yes or a no equally absolute (...). This is a capital fact in the history of philosophy because in this way it was settled the problem of the reason process". He also settled the principle of excluded middle and the first demonstrations by reducing to absurdity appear too.

In the face of a Creature who exists, which has not as source a Non- creature - because this is denied - the reality, in his turn born from Creature, receives the attribute of immobile, eternal and indivisible, in non-motion and no change.

Zeno from Elea (490-430 A.C.) a self-taught peasant, who became a friend of Parmenides, and was initiated around him into the problems of geometry, came to elaborate five paradoxes, from which only four are known, those which over a century Aristotle will analyse and combat in his *Physics*. There's no knowing what was Zeno's aim to invent these paradoxes, but it is supposed that his intention was to combat the Pythagoreans, to test the theses of Parmenides and starting from the plurality and the motion to draw attention on the internal contradictions to be found into the mathematical notions regarding the space, time, continuity and motion (5).

The four Zeno's paradoxes are: the dichotomy, Achillis and the turtle, the arrow and the stadium.

The dichotomy consists in the idea that motion doesn't exist because to conver a certain distance a mobile object must reach the middle of distance and for this purpose the middle of the half distance and so on. But the mobile object can't cover an infinity of intervals in a given time.

In the paradox of Achillis and the turtle they show the useless position of Achillis who never could overpass the turtle. The turtle has a small lead against Achillis and starting the competition in the same time, Achillis will try to reach the starting place of the turtle in a period t_1, but in this period of time the turtle gains a new advance. In the period t_2 Achillis

will try anew to overtake it but the turtle will use this time to cover a small portion of way. Achillis will aproach all time the turtle without succeeding to overtake it ever.

In the paradox of the arrow they show how the flying arrow is in repose. Starting from the idea that a thing is in repose when it takes up a space equal to its volume, and flying objects fill evermore and in every moment a space equal to their seize, than the thing can't move.

The concept of thing's imuability and non-motion upheld by Zeno and his Eleats was critisized and combated by philosophers even by those contemporary whith him. The Romanian philosopher Nae Ionescu quotes the following event: "After some time, the Greek, who demonstrated that motion doesn't exist, luxated his shoulder and came to another cove to straighten it up. This finds the opportunity to bring to book: «You said last time that motion doesn't exist, that a thing can't be in two places, or there it is where it is, or there it is where it isn't, if it is there where it isn't it is absurd because a thing can't be there where it isn't; accordingly motion doesn't exist, therefore how happened to luxate your shoulder?»"(6)

The paradox of stadium is presented like three paralel rows of players every marked with a row number and a place one so that the player with the same place number from the first rows (1_1, 1_2, 1_3) are to be found on the same line. Keeping the first line in a repose position, and the other two lines in a contrary motion one by one places, one can meet the situation when in front of the player 1_2 would find the players 2_3 and 3_1. This bring forward that the player 3_1 passed not only over a single place in a given moment, but over two places because he came in front of 2_3. As these passages are successively performed with a double time expense, one can infer that the unique moment of time in which the passage took place, accordingly an indivisible moment, is in fact divided in two as the result shows us. This is an attack to the partisans' adresse of finite divisibility of time.

The Zeno's paradoxes and of others authors were named from the time antiquity as aporias after the Greek syntagm *he aporia* which means incertitude, hesitation, difficulty. All these Zeno's aporias can be summed up in a sylogism: all what exists is into a space / therefore space exists / therefore the available space lies into a space / and this space must exist in another space / and the whole indefinitely / accordingly space doesn't exist.

In all these paradoxes clearly appears the Zeno's thinking whereafter the space would divide indefinitely and the motion is impossible. But Zeno makes a plain error by dividing the finite interval to be covered by a mobile object into an infinity of fragments which taken into the reason process are considered anew as an infinite at the extremities. Therefore Aristotle considered the aporia of dichotomy as a paralogism (para = against; logos = reason) respectively a sylogism commited whithout the intention to mislead. In the Achillis and the turtle aporia the error consists in the confusion between, on side, the total of infinite intervals of time whose duration decreases towards zero and on the other side, a duration always indefinitely towards which Zeno pushed the thinking into paradox (7). In the case of the arrow, Zeno considered the motion as a sum of reposes in which the arrow lies a moment into a space equal with itself and so in that moment it is in repose, imobile, because the moment is indivisible. Zeno isn't the single person concerned by the infinite. Proclus (412-485), the commentator of Euclid's "*Elements*", one of the last representatives of the Athenian mathematical school let us an interesting paradox: if we draw two semicircles upon a diameter, an infinity of diameters allows to obtain twice more semicircles than diameters. Accordingly *two infinities* of semicircles...

In the problems of infinite, though the concept appears in the antic geometry and continuously was commented on it over the mathematical history, it wasn't determined clearly till at the end of 19th century, being considered as a great or a small infinite value. Jules Tannery, the known French mathematician from the end of 19th century, wrote: "The infinite notion, which mustn't consider a mystery, can be expressed shortly in this manner: after every whole number comes another one". The matter will be cleared alongside the issue

of the works of Richard, Dedekind, Georg Cantor, Gottlob Frege, Bertrand Russel, David Hilbert and others.

But the antiquity promotes the paradox not only as a mathematical speculation. Euclid from Megara (about 450 - 374 A.C.) gathered around him some brains trained in the art of controversy, of abstract discussion and speculations belonging to the so-called "eristic", which brings forward difficult logic problems still present also in the heed of contemporary logicians. Among the logicians of the Megarian School seven paradoxes are ascribed to Euclid of Miletus (4th cen. A.C.) as we are informed by Diogenes Laertios in his work *De vitis, dogmatibus et apophtegmaticus clarorum philosophorum*. The must important of these paradoxes is the well- known paradox of the liar by means of which he doubted the universal value of the principle of contradiction.

The liar's paradox is enunciated in this manner: "What I am telling now is a lie". The question is am I telling a lie or the truth? If I'm lieing when I say "I tell a lie" this means that really I don't lie, but I tell the truth. If on the contrary I tell the truth when I say "I tell a lie" that it is obvious that I lie. Thus when I lie, I tell the truth and when I tell the truth I teil a lie. It follows as being true two contradictory assertions, both demonstrable. But the contradiction is due to the confused meaning of the two assertions. The first: "I tell a lie" expresses a factuel state, renders in words a reality, the assertion is part of the object language. The second: "I assert that I tell a lie" it is no longer the expression of a factuel state but a comment upon "I tell a lie" i.e. it is a comment on a statement a reference on the object language and therefore the assertion enters the zone of the metalanguage. In the assertion from the metalanguage "I assert that I tell a lie", the affirmation of object language "I tell a lie" is only a part of the assertion, namely the object I'm telling about. "The liar" is a semantic type of paradox in which the contradiction lies in the meaning difference originated in two planes, object language / metalanguage. This last concept was introduced into the linguistics and logic in 1933 by the Polish mathematician and philosopher Alfred Tarski (b. 1901) one of the founders of the semantics.

The liar's paradox is in fact an antinomy, but which is the difference between the paradox and antinomy? A paradox consists in two enunciations so that every one of them is true exactly when the other is false. It is the formal type of paradox in which the concepts are pushed to the limit and the limits are taken absolutely. For example, "the barber's" paradox by Gottlob Frege: "Here are barbered only those who aren't selfbarbering persons" and the question is: "here, in this barber's shop, this barber is a self-barbering person or not?" From the first enunciation one infers the existence of a class of those who are selfbarbering persons. This class comes to this barber. The barber of the shop does or doesn't belong with this class? If the barber is a selfbarbering person and doesn't belong with this class and because in the shop he barbers only those from this class results that he isn't a selfbarbering person. If on the contrary, he isn't a selfbarbering person and so he belongs with the above mentioned class which go to the barber's shop, he arrives at his own shop and so he barbers himself alone. The contradiction is abvious: If he is a selfbarbering person then he doesn't barber himself and in the reverse situation when he isn't a selfbarbering person then he barbers himself. The class of those "who aren't selfbarbering persons" represents a limitation and "the barber of the shop barbers only those... from this class" represents the absolute case of this limit.

Apart from this type of paradox, the antinomy is a paradox in which every statement derives logically from the other ones. The antinomy is a particular case of paradox (R. Pozner) namely a semantic paradox. As example and explanation of this sematic paradox the reader found it already in the previous lines in the liar's paradox.

It exists still an antic variant of liar's paradox due to the poet Epimenides from Cnossos (6th cen. A.C.) to whom the tradition ascribes a life of miraculous length, with many lives on this earth. Epimenides states that "All the Cretans are liars", that "Nor a single Cretan tell the

truth, never". If Epimenides - who is a Cretan - tells the truth, that all the Cretans are liars, it follows that he lies. But if Epimenides is lieing, if the statement of Epimenides is deceitful, one can infer that at least one Cretan tells once the truth. So doesn't exist the certainty that Epimenides could be found among the Cretans telling the truth.

From the analysis of this paradox appears logically the fact that when Epimenides tells the truth it follows that he lies. But from the second statement, when Epimenides lies doesn't follows *a fortiori* the first statement i.e. he tells the truth. So, because there aren't both the implications satisfied the paradox isn't an antinomy, it is a semiantinomy because only a simple implication is fulfilled.

The liar's paradox was analysed by many antic authors in their works - Theophrastus, Seneca, Chrysippos, Cicero, Plutarch, Philetas who, is said, died as the result of his struggle to solve it, and Diodor Chronos who made suicide because he didn't succeed in solving such a "logical puzzle" - and lay also at the origine of other paradoxes which could be considered similar variants of the primordial one. In this way the simplest variant of the liar's paradox is the following: "The sentence I am saying now is false". The Latin scholar Aulus Gellius (130-175) in his work *Noctes atticae* (Attic nights) restores other paradoxes too. One of these is named the sophism of the crocodile which kidnaps a child and promises to return him only if his father will guess the crocodile will give back or not the child. Here the dilemma is the following: what will do the crocodile in the case it occurs to the father saying that the child will not be given back?

A liar type form is the sophism pulled out from the Q.Ennius'satires which was found also in the work of Aulus Gellius: The one who claims he cheats cunningly somebody else is wrong saying that the man whom he cheats would be cheated, but the man he cheats feels that he is cheated, and in the end, the one who cheats is wrong because the other one isn't cheated.

A paradox to be called of trial - cited also by Aulus Gellius - appeared between Protagoras and his disciple Eulathus. Protagoras was engaged as professor by Eulathus, the disciple being obliged to pay the fee after he would have earned his first case. The time passed and Eulathus hurried not getting involved in some lawsuit and so he wasn't obliged to pay his professor. Becoming aware of the trickery Protagoras brought to trial Eulathus based on the following argument: "If you'll gain you will be obliged to pay in accordance with our agreement because this case is the first one gained by you; if you'll lose it you'll be obliged to pay me in conformity with the sentence of law court". At these words his disciple Eulathus comes with this immediate retort: "If I lose the case, I will not be obliged to pay the fee because our contract stipulates the obligation to pay only in the situation in which I'll gain my first case. If I'll gain it, I'll not be forced to pay as the result of law court sentence". So if Protagoras loses the trial he gains the money, if he gains the trial loses money. This paradox originates from the double position of Protagoras: that one of professor of the young lawyer and the other as party in trial. When Eulathus have to pay the professor he is in debt to the person who brought him to trial and when he is in debt to this last person he isn't in debt to the first person.

Another exemple is the giants'paradox (after Fernand Gonseth). On an island there was a race of clever giants but cruel. They murdered - from cruelty - every foreigner who arrived at they. But - in their cleverness - they used to obtain the capital sentence even from the mouth of the foreigners coming in the island. The giants put a question and if the answer was true the victime was sacrificed to the Truth's Idol; if the answer was false the foreigner was sacrificed to the False's Idol. One day happened to arrive a very clever foreigner and when the giants asked him wholly imprudently: "How will you be sacrificed?" the answer fell promptly "You will sacrifice me to the False Idol". The giants'council reached a great dilemma. If the foreigner told a truth he might sacrificed to the Truth Idol but in this case his answer was false; if he told an untruth he might sacrificed to the False Idol but in this case he told

the truth. As the assertion of the foreigner couldn't be considered nor true nor false, because both the cases were in contradiction, the foreigner couldn't be killed.

This paradox is like one cited by the Romanian philosopher and logician Anton Dumitriu (1905-1992) which we could name the caliph's paradox (8). A philosopher is sentenced to death by a caliph who gives him the opportunity to choose the way to be killed. "You will be hanged if you will tell a lie, you will be beheaded if you will tell the truth". After a while of reflection he said: "I'll be hanged". The answer is plain but contradictory because if it is true the philosopher might be beheaded, but in this case his assertion is false and so he must be hanged. If his reply is false the philosopher must be hanged but in this case the assertion is true and then he must be beheaded. From this comes to the fore that the sentence "I'll be hanged" can't be considered neither a true answer nor false though it might be only true or only false. The vicious circle results from the manner in which the philosopher changes the problem data: what the caliph settles as conditions which decide upon the results - the manner of your execution is function of the truth value of your answer - the philosopher reverses by putting the results as being conditions - the truth value of my answer is function of the manner of my execution.

The frequency of these variants of liar's paradox, the wealth of the forms taken by the antinomy due to its semantic character, direct our thoughts to the assertion of apostle Paul "God tells the truth, the man is a liar" which falls fatal in the incidence of liar's paradox because it leads to the questions - also paradoxal - of the Romanian philosopher Constantin Noica: "How can make a perfect and good Creator a world however full of evil...?", respectively full of liars?

The Megarians had more many paradoxes in their wallet. The veiled man's paradox: "Do you know this man? No. He is your father; So, you don't know your father". The bald-headed man's paradox: "How many hair must lose off the head in order to be called bald-headed?" with his variant: "If n hair are necessary not to be considered bald-headed man then a man with n-1 hair is a bald-headed one". And this in contradiction with the fact that if the loss of a thread of hair is not enough to become a bald-headed man. The heap paradox is similar to the previous one: "How many grains of wheat form a heap?" The contradiction appears if one asserts that a predetermined number of grains forms a heap e.g. 500 and then 499 grains don't form a heap. Similar to these two paradoxes is also the paradox cited by Aristotle of the drop of water boring the stone: If the first drop has no effect, nor the second nor the last, then how the hole in the stone was made? It is like you would try saying with how many flowers comes the spring as in the well-known proverb. The explanation of these paradoxes will come later together with the appearance of the set theory by Georg Cantor, of the gradual contacs by L. Zadeh (1965) etc.

There is a paradox of Socrate originated from his famous assertion: "I know that I'm knowing nothing", where it is supposed that Socrate knew nothing. But if he knew that he nothing was knowing, inevitably he contradicted himself because he knev something. But something is a little more than nothing (9).

The Latin philosopher Aurelius Augustinus (324-430) solved an interesting aporia regarding the transient, essential ireversible nature of time. Augustinus shows that if nothing passed away, there would not be past; if nothing were coming, wouldn't be *future* and if neither were, wouldn't be *present*. "As regarding the present if it was evermore present it wouldn't be time anymore, would be an eternity. Therefore, if the present, in order to be, must pass in the past, how can we tell that it is this, which can't be than ceasing to be, because otherwise we can't tell it is time than because it tends to not to be".

There is also a paradox of Diogenes retold by the Romanian philosopher Emil Cioran in his Essays: "Menip in his book entitled *Diogenes'virtue* tells how this being taken prisoner and then sent to auction was asked what can he do, and he answered: "To order" and cried to the auctioneer «Ask therefore who want to buy a master?»" (10).

The paradox in Middle Ages

The Middle Ages, "the dark" is revalued in the logic domain too, coming to the fore the fact that the scholastic logicians were concerned in a high degree about the paradoxes and antinomies well-known with a term proper for this epoch as Insolubilia. The first work where one can find this kind of problems is the treatise *Summulae logicales* with a large echo during the time, written by Petrus Hispanus (1226-1277) who became The Pope John 21st. Important contributions to paradoxes will bring the scholastic logicians Jean Buridan, Pierre d'Ailly, Albertus of Saxonia, Paulus Nicolettus Venetus, Wilhelm from Ockam, Hentisberus, Radulphus Strodus, Wilhelm of Shyreswood and others.

The problems arised by the so-called *Insolubilia* have as starting point the liar's paradox related by Petrus Hispanus in a proper formal scheme: A tells the truth, B tells the truth, A and B assert simultaneously the false. Do they tell the truth or the false? This *Insolubilia* will be to found in several variants to all the scholastic logicians and are reported systematically and exhaustively by Albertus of Saxonia in his work *Perutilis logica* in a series of 14 variants at which he adds still five. In the following a group of ten Insolubilia is given in a short rendered form (8).

1. Supposing I don't tell other assertion than "I tell the false" it is asked if the assertion told by me is true or false. But the essay to establish the truth or the false of the assertion "Ego dicum falsum" leads *a fortiori* to the liar's paradox.

2. Supposing Plato states a single false assertion "The man is an ass" marked with B and let be the assertion "Any other assertion expressed by me isn't similar to that expressed by Plato" marked with A. The question is if A is true or false.

3. "This assertion is false". This proposition is marked with B. The question is if B is true or false.

4. Supposing Socrate pronounces the assertion "Plato is telling the false" and Plato tells the assertion "Socrate is telling the truth". The question is if the Socrate's assertion is true or false.

5. They suppose there are only three assertions: "The man isn't an ass", "God isn't", and "Every assertions is false" and is asked the question if the third assertion is true.

6. It is supposed Socrate asserts Plato tells false, and Plato asserts Cicero tells false, and Cicero asserts Socrate tells false. After this is asked the question if Socrate tells true.

7. Let Socrate tell "God exists" and let Plato tell "Socrate only tells true" and should be noboby in the world speaking if Plato tells true.

One can see in this paradox, as in the case of the above mentioned ones, that if Plato's proposition is true, then the truth is only on the side of Plato and so Plato's proposition is false and therefore if isn't true that only Socrate tells true but Plato too - because in the statement is put the condition of non-existence of other persons in the world - resulting that Plato's saying is true, therefore only Socrate tells true what leads to the conclusion that Plato's saying is false etc.

8. There are only three propositions in the world: "The man is an animal", "God exists", "Any proposition without the exceptive one is true". The question is if the third proposition is true.

9. Anybody excepting Socrate let tell "God exists" and should Socrate tell "Any people excepting me tells true". How is this Socrate's proposition, true or false?

10. Let Socrate tell "God exists" and should Plato tell "The man is an animal" and let Cicero tell "The man is an ass" and let Marcu tell "How many people tell true so many tell false". The question is if the fourth proposition is true.

This kind of paradoxes forms the logic base of *Insolubilia* genre. The logicians of the time considered *insolubilia* as a contradictory proposition which in the same time is true and false (Jean Buridan) bringing to light the problem of the universality of the principle of

contradiction and which presents a certain degree of difficulty in an attempt to solve it. The paradoxes bear the name of "insolubilia" not because they can't be solved by no means - *vox invisibilis* - but due to the difficulty to find a solution for them. (Ockam, Venetus, Albertus of Saxonia). The logicians of the Middle Ages weren't content with a simple statement of *Insolubilia* but they tried to find the solutions by solving them. Jean Buridan analysing the reciprocal type of paradox - *Socrate dicit verum, Socrate dicit falsum* - established that these propositions can't be simutaneously true,- and by introducing the concept of simul = in the same time - shows that a proposition can be declared true or false only whether the time refering to is exactly given, the contradiction being eliminated only on condition to separate the two periods of time suitable for *Socrate dicit verum* which has performed in the past and the interval of time when *Socrate dicit falsum* and which has performed in a time previous of the first one.

Albertus of Saxonia introduces the concept of *impositio* which means that a part can't represents the whole. In this way in the paradox "A is false" noted by the symbol A, the question is if A represents the truth or the false. The solution of this paradox after the above mentioned author is as follows: as A ("A is false") is a whole, a unit, the question if A represents the truth leads to the conclusion that "A is false" is false; if A signifies the false then the proposition "A is false" is true because A represents this proposition and therefore A represents the truth.

Pierre d'Ailly remaks two types of difficulties in analysing and solving the paradoxes. The first is general and is refering to the truth or the false of the propositions, for which must establish, which is the real mental proposition, which is the true proposition and which is the false one. The real mental proposition is a proposition - true or false - whose truth and false is to be found in "the mental essence of the reason" situated over the lingvistic differences. The second difficulty of special nature is represented by the propositions with meditation on themselves, the author showing that no a simple proposition expressed by mouth or in writing can represent itself and some more else formal. The author shows that the propositions represent something in two manners: objectiv and formal i.e. real and mental, but the mental proposition may be true or false as it does or doesn't represent the real state of matter without asserting something on itself i.e. that it is true or false. The mental reason can't be altered by this "insolubilitas" says Pierre d'Ailly but the inadequate mental proposions and especially the written or spoken ones may be. The confusion between the first and the second type of propositions brings about the insolubilitas. The solution is to identify the truth values of a mental proposition which can't be expressed in the very system of mental propositions and to remove the contradiction appearing in the written and spoken propositions, in those places where these truth values are expressed in fact.

The logician Paulus Venetus presents in his works *Logica magna* and *Quadratura* a survey of all solutions regarding *Insolubilia*. Some of these solutions are: 1. "I tell the false" or " Socrate tells the false" are propositions in which a gramatical confusion is comitted, the term "false" given as an antecedent term for the word "tell", actually being consequent on another thing, for which I tell or Socrate tells indeed. 2. Nobody can say that he tells the false, and therefore doesn't exist any proposition which should be set up as being *Insolubilia*. 3. There is also the solution in which the *Insolubilia* may be either true nor false but somewhere in the middle, in a neutral zone between the two extreme limits. 4. Another solution resorts to the idea that every expression with double meaning is either true or false, according to the context, which falls exactly in the case of Aristotelian mode of thinking. 5. A solution presumes that no *Insolubilia* is true or false because no proposition of this kind can be considered as proposition but only a *flatus vocis*. 6. There is the solution considering *Insolubilia* either true or false but not simultaneously. 7. Also exists the solution taken over from Buridan's works which considers the truth values of a proposition as function of time in which this proposition expresses these values.

From just this partial analysis of the solutions intended by the scholastic logicians for their own *Insolubilia* emerges a similitude of them, the common elements being the confusion in meaning by accident: the part considered as a whole, a settled period of time - when a proposition is true or false - as unsettled one and finally the real mental proposition considered as a spoken or written proposition. These errors by accident represent the logical knot of problem. One can bring to light also the tendency of Middle Ages'logicians to discover the errors and to explain the paradoxes, wishful to focus the zone of contradictions till their disappearance. This is an essential point in comparison with the position of today's logicians who - will see later - have a completely other posture regarding the paradox problem excepting the logician Ludwig Wittgenstein who has an identical conception like the scholastic logicians without any reference to them. The Romanian logician Anton Dumitriu ends his analysis in the chapter on *Insolubilia* with the words: "nothing essential of what our times have spoken regarding the problem of logic - mathematical paradoxes surpasses the solutions of scholastic logicians" and either these nor those "didn't find out the logical and plain solutions able to make clear all the points of the problem...".

The paradox in science

The paradox has developed together with the accumulation of the knowledge complex built upon the succesion of ideas and meditations, on the experience and actions of a great number of thinkers and distinguished researchers who in the course of time achieved the scientific, technical and cultural edifice of the mankind. Every discovery in part, every field of science that formed its own area, a branch, a fund of laws, principles and characteristic methods, has identified its own errors, deviations and contradictions, some of them hardly tinted, others more visible, and not a few of them strong, steep, sliping in "the abyss" of paradox, but not with an echo within the ranks of scholars and philosophers who have found on this misshapen ground too new ideas helping to come out to light. It was formed a real list of paradoxes, a rich collection which could justify the existence of an independent domain - *Paradoxology* - with his history, his own principles, laws and methods. We gathered in the pages of this book many paradoxes offering a mozaical image of the human spirit of what we could call the world seen in the anamorphosed mirror of paradox. Let go on an excursion into the universe of scientific paradox from the antiquity till this troubled end of millenium.

The paradoxes from the science and technique domain, so much frecvent in our modern epoch, already from antiquity were made acquainted. With the name of Aristotle (384-322 A.C.) is linked the paradox of the wheels (11). Considering two concentric wheels with unequal radii ($r < R$), each one tangent at the straight lines S_1 ans S_2, by rolling they unfold a quarter of circle of 90° on the segment of a line $\overline{BB_2}$ irrespectively $\overline{AA_2}$. The parallelogram ABB_2A_2 is formed in which $\overline{AA_2} = \overline{BB_2}$. But $\overline{AA_2} = \frac{2\pi r}{4} = \frac{\pi r}{2}$ and $\overline{BB_2} = \frac{\pi R}{2}$, so $\frac{\pi r}{2} = \frac{\pi R}{2}$ and finally $r=R$. As the result the two wheels appear equal because their radii are equal. Aristotle caught the so-called "vicious circle", but the explanation of this paradox was found out first by Heron and later by Galilei who demonstrated that during the rolling motion the larger wheel unfolds its quarter of circular arc on the segment of a line $\overline{BB_2}$, and the smaller wheel rolls simultaneously with a slide divided in a number of small slippages performed contrary to the rolling.

At the end of the world tour in July 1522 Pigafetta concluded that his arrival in Cape Verde Islands, written down in the log book on Wednesday, actually took place on Thursday. Sailing constantly westwards in the same sense as the planet rotation they lost a day against the local calendar, the day the staying people had lived and the people moving arround the Earth consumed it in the account of the other days. Traveling together with the sun their days

swelled for every degree of longitude with four minutes. These multiplied by 360 degrees, representing the Earth circumference, give 24 hours. This is what became the Magellan's paradox (12).

The Jesuit monk Grimaldi (1618-1663) selfeducated, performed optical experiments consisting in projection on a wall of light disks obtained through an aperture and then through two apertures made in the window-shutter. The approach of the disks and their partial superposition gave birth to darker parts. The phenomenon in which the light added to light gave darkness appeared as a paradoxal one. This phenomenon was named interference and was studied by the English physician T. Young (1802), and has been explained with the help of the ondulatory theory. Two alternatives are shown: the first, named the constructive interference, considers the waves being in phase when their combination will lead to an amplitude of the resulting wave equal to the sum of the individual amplitudes, and the second the so-called destructive interference in which two waves are in phase opposition (phase displacement of 180°) and leads to the combination of a wave with an amplitude equal to the difference between the amplitudes of the individual waves. In the case of Grimaldi's experiments the amplitudes of the two waves are equal but in phase opposition, and due to the interference the amplitude of the resulting wave is zero and ... darkness. The phenomenon remained under the name of Grimaldi's paradox (11).

Blaise Pascal (1623-1662) is the author of the hydrostatic paradox (13) in which one can meet the apparent contradiction between the quantity, respective the weight of a liquid standing in a vessel and the pressure this liquid develops on the bottom of the vessel. This pressure is independent of the quantity of the liquid and of the shape of vessel, but dependent on the surface of the bottom and the height of the liquid column. The paradox consists in the fact that vessels with different sections and quantities of liquid but with the same surface and height of the liquid column have the same hydrostatic pressure. If the walls which take over or reduce the "surplus" of water and which enlarge or narrow the opening of the vessel would be eliminated then the paradox would be solved and would be demonstrated the hydrostatic pressure identical for all types of vessel.

The gravity remained not exempted from the paradox. It is knowing that in conformity with the law of universal gravitation by Newton (1642-1727) all the bodies are attracted by forces which are proportional to their mass product and in an inverse variation to the square of distance between them. The German astronomer Rudolf Seeliger (b. 1886) elaborated the gravitation paradox (14) asking himself why doesn't act a reciprocal attraction among the stars present in an infinite number in the universe? For, if the mean density of the matter is higher than zero, the value of gravitational potential of the universe is infinite. But the accelerations which would have to appear based on this potential are out of our observations and nothing is happening due to Newton's law and the proposed paradox by Seelinger. It would infer that what the American professor T.Zwicky calculated as being "the critical distance", the value of $5 \cdot 10^8$ light years, for the zone in which the law of gravitation would act and beyond which the Newtonian forces would become insignificant is a possible reality, and the worlds separated by these enormous distances would remain "neutral". Octav Onicestu goes on upholding the unity and the equilibrium of the universe due to a simultaneous action of some forces of attraction and elastic rejection because otherwise the exclusive action of "the attraction among the bodies (...) without the presence of the repulsive force the universe would have been a victime of a destructive colaps long since" (15).

The paradox of the hollow planet (1687) belongs to Newton who posed himself the question if a miner descending into a very deep shaft will increase its weight in conformity with the principle of growing of gravity till its colaps in the centre of Earth. It is demonstrated that this paradox is caducous because the force of attraction doesn't increase but to the contrary it decreases during the descending into the shaft. The calculations show that into a hollow planet the force of gravity is zero.

Now let go over the gravity paradoxes to one from the field of mechanics (11). Into a pipe in which a fluid flows towards an open end an elastic plate put on the mouth of the pipe manifests a strange behavionr: the plate isn't pushed by the current of fluid, but to the contrary it is attracted towards the mouth of pipe. Around the collar of the pipe the dynamic pressure is increased but in conformity with the law of Bernoulli (1700-1780) it is compensated by the static pressure which decreases. In the same manner a cornet of paper lieing in a funnel under the action of an air current, moves up and down (Désormes effect) and does't fall out because the static pressure is more increased at the top of funnel than at its border and this diference pushes the cornet towards the top of funnel. When the cornet closes the access of air at the top of funnel it falls, but immediately appears the diffence of static pressure which pushes up the cornet anew. These circles are repeated as long as the air current is blowing in the funnel. The paradox bears the name of two famous scholars Désormes and Bernoulli and can be found in the university courses and even in the secondary school books (11).

D'Alembert (1717-1783) French philosopher and mathematician has noticed that a symmetric solid body e.g. an imobile or moving sphere lieing into an ideal fluid (omogenous, unlimited, without weight, frictionless) doesn't undergo any flow pressure, what is contrary to the experiment, a paradox, but real. D'Alembert discovers a hydrodinamic paradox bringing to light a flagrant contradiction between the common practice and severe theory. The explanation of this paradox consists in the fact that the pressure of the fluid is maximum and opposed in both sides of the sphere situated on the central axis of the fluid flow.

The second law from the photometry of Lambert (1728-1777) shows that the nearer to the perpendicular on the objects are the solar rays the greater is their heating action. But in polar regions of the Earth the vertical objects are more heated than the horizontal ones which appears paradoxal. The sun doesn't rise too high above the horizon, therefore the rays fall at an angle of 45°, almost perpendicular to the vertical objects, what explains the apparent paradox.

The paradox takes over also beyond our common world in the far zones of the universe. In 1826 the German astronomer Heinrich Olbers (1758-1840), from the astronomical observatory in Bremen, asked the question why in the night the sky is black and the radiations sent to the Earth by the myriad of stars present in the universe don't create a permanent brightness? The explanation appeared from different corners of the world: Charlier speaks about a multilevel structure of the universe in which the galaxies, as giant as they appear, are separated by more superior distances than their diameter, at which V. Slipher and E. Hubble add the idea of the universe expansion which provoques an attenuation of the light arriving from the moving off stars. R. Proctor upholds the idea of radiation absorbtion of the stars from other galaxies by the dust of our galaxy. The paradox received the name of the astronomer and is named also the photometric paradox (16).

Zig-zaging with the paradox through different domains let return on earth in the time of the French Revolution. In those times it was elaborating in France the first democratic constitution, when Antoine-Nicolas Caritat, Marquis of Condorcet (1743-1794) French philosopher, mathematician and politician has been put in the situation to examine an election rule regarding the problem of majority, which in practice could lead sometimes to contradiction (17). For instant: there are the candidats A, B and C and 21 voters, and following the permutation of letters A, B, C result six different hierarchies like these: 2 voters prefer the hierarchy ABC, 6 - the hierarchy ACB, 2 that of BAC, 5 the BCA, 2 the CAB and 4 the CBA. By carrying into effect the rule of simple majority A is indicated by 8 voters, B by 7 and C by 6 voters and finaly A wins the election and C is on the last place. But when we take to account not only the votes indicating the winner but the whole information one can observe that A is prefered by 10 voters before to B, 11 voters prefer B before A. So the preferences put the B before A. Comparing the pair A, C we see that C is prefered against A by 11 voters and A is

prefered against C only by 10 voters. Farther: C is prefered against B by 12 voters and B against C by only 9 voters. The new hierarchy is C, B, A exactly the reverse of that resulted from the majority rule.

There are well-known the atomic-size "demons" (18) imagined by the English physicist Maxwell (1831-1879), which set at a little door, also atomic, performed in the wall between two rooms, could separate the molecules with temperature pushing them into a microturbine installed in a pipe laying between the two rooms too. When the temperature diference would disappear the "demons" select anew the molecules on their velocity difference basis and the cycle would be resumed. Here is a paradox offered by a thermal machine which produces work with no expense of external work. The state of energic differentiation means order. The passage from this state to one of levelling, uniforme, of equilibrium means a passage, without external intervention, towards a state of disorder more and more probable, with increased entropy (from greek: en = in; trope = change, retourn, content of the passage). Rudolf Clausius (1850) shows that "the energy of the universe is steady, but the entropy always increses and tends to reach a maximum". The entropy points at the sense of evolution of an ireversible phenomenon" (Boltzmann). Lack of balance, differentiation means little entropy, but disorder, omogenization, equilibrium means maximum entropy. "Nature tends going from the less probable to the most probable states" asserts the Austrian physician L.Boltzmann (1844-1906). He established that entropy is proportional with the logarithm of thermodynamic probability of a system $S=KlnP(w)$. In the framework of the information theory Shannon established that the formula of the information quantity is the same like the formula of entropy $I=KlogP(A)$, where P is the proportion between the possible states before the enter of information and the number of information - a single - after the receive of information (19).In the identity of this two formulae one can find the clue of Maxwel's paradox. When the demons take action on the state of gas omogenization by selecting the temperature molecules, they decrease the thermodynamic entropy of sistem, but consume the equivalent in informational entropy. The information of "demons" is tranformed in negative entropy respectively negentropy (L.Brillouin) which leads to the decrease of the thermodynamic entropy of system.

Starting from Dalton's formula as regards the pressures of a gas mixture considered as the sum of the pressure of each individual gases, the American physicist J.W. Gibbs (1839-1903) supposes a similitude, namely the entropy of gas mixture is equal to the sum of the entropy of the initial gases (20). The theory works in the case of the real gases and for different ideal gases, the variation of the entropy due to the diffusion of gases being above zero, therefore an increase of the entropy taking place. But in the case of identical gases the theory doesn't work and the matter appears like a paradox; the Gibbs'formula isn't verified in the Gibbs'experiment. The explanation of this paradox was given by Gibbs himself who based on the principle of identity of microparticles, where after the permutation of two or several identical particles doesn't establish a distinct physical state compared with the initial one, shows that isn't possible to record a variation of the entropy in the case of a simple redistribution of the particles belonging to a mixture of two identical gases.

The American physicist J.Lane states, in the middle of last century, the paradox of the stars with gravitational contraction (11) which are warm though in the same time they are loosing heat. The paradox is only apparent because in conformity with the theory, during the astronomical periods only 50% from the reserve of the potential gravitational energy of stars is consumed for their contraction (finally reaching the cinetic and thermal forms) the rest of 50 % being radiated in space. Even the stars poor in their own energy, during the phase of decreasing their radius and keeping a constant mass, they are warm on the account of attractive potential energy delivery. But the contraction reprezents only the first or the last part of a star life, which related to the sun represents only 0,3 % from the entire its life. In this case the going out from this paradox is possible only in the phase of contraction because

in the phase of maturity the stars deliver the energy as the effect of the thermonuclear reaction as it is happening today in the sun.

The English microbiolog E.H. Hankin is the owner of a paradox bearing his name (11). During his studies on the cholera virus - Vibrio cholerae - in India, he observed that in a big town on Ganges the concentration in vibrios is thousand times smaller at the exit of the river than at its enter in the town against any logic. He concluded that a factor exists which destroys the specific virus of this disease. By chance the presence of some bacteriophages specific for certain desinteric bacilli was found in the waters of the Ganges right to the town. Later the matter have been settled but in the decades of the last century when Hankin carried out his researches the phenomenon noticed by him was considered a paradox.

An apart paradox was formulated on the base of the theorem of Poincaré (1854-1912), whereafter a finite mechanic system confined into a limited space after a determined interval of time resumes to a dynamic state identically with its initial state. One can speak about the chance to create a perpetual motion of second type (11) irrespectively to suggest the existence of an antiuniverse type Flammarion / Poincaré where the systems in equilibrium, i.e. with constant temperatures, can resume through reversible differentiation processes of temperature by its own. They could assist at a "reverse" world with funny phenomena of lifting of bodies from their places, the separation of fluid mixtures, oil viscosity acting for easy work of machines, projectiles and bulets which return in their guns. A paradoxal universe full also with unforeseeable nightmares in which the bios and the world phenomena would be dominated by the main law of retrodiction - symmetrical to that of prediction - with "evolution" of phenomena towards the initial state, all elapsing in a giant period of time, undeterminated, because the retrodiction not being in theoretical point of view impossible is extremely improbably for the statistical systems with infinite dimensions.

The German astrophisicist K. Schwarzschild (1873-1916) made evidence of a paradox regarding the outer corona of the Sun (11, 21) having temperatures of one million degrees and in the eructations till ten million degrees, near the temperature of the centre of the Sun - where are twenty million degrees - meanwhile the temperatures decrease from centre to periphery reaching in photosphere to 6000°C and in chromosphere even lower. The explanation is given by the German scholar self, by the heating of the rarefiated gases from photosphere, by the "noise" of turbulent displacements from the photosphere, the nuclear energy being at a high level enough in order to maintain a hot tempereture of corona. The phonomenon is similar to the propagation of acustic waves into the rarefiated gases, when the passage from one to another medium is transformed in "shock wave".

All hot bodies emit electromagnetic radiations from those invisible like the thermal radiations of a stove till the visible ones emited by an electric bulb, the Sun, the stars. The energy of the incident radiations on the surface of a body is reflected partially, a part is transmited and a part is absorbed. If the radiation energy is absorbed at a whole by a body it is said this is a black body. If the incident radiations penetrate a blackened box provided with a little aperture, the captured radiation suffers some reflexions when it loses succesively the energy till a value near zero. Such kind of arrangement is named an absolute black body. It was calculated that the total energy of radiation of the absolute black body, the totality of the intensities summed up for all the frequencies, would be infinite. This is a nonsense in physical point of view, "something fundamentally and absolutly wrong" says Teynmann (22). This result, which comes to contradiction with Stefan-Boltzmann law, whereafter from the calculation it might result a determined radiation energy, bears the name of "violet catastrof", by the fact that the corresponding energy of the frecvencies from this spectral zone would be infinite. The paradox of the English physicist and astronomer Jeans (1877-1946) was resumed by the German physicist Max Planck (1858-1947) with the quantum theory (11).

In all the books about travels in India it isn't omitted the description of the famous iron column from court of the eight centuries old mosque Quwat arising from a temple worshiped

to god Vishnu; this column of eight meters high symbolizes the perennial nature of the Indian people, but not by chance: on its surface one can't find a single rust spot, the inscriptions in Sanscrit are readable today too. The English metallurgist Hudson explains (11) this paradoxal situation by the fact that iron oxidizes itself only into an atmosphere with a relative humidity of at least 70 % but in the city Dehli never was rekorded a relative humidity above this value.

In connection with this subject it is another paradox, saying that for equal volumes the dry air is heavier than the wet one. In order to explain this paradox we must remember the Avogadro's law, saying that equal volumes of gases in identical conditions of temperature and pressure contain an equal number of molecules. But if a cubic meter of dry air contains a number of molecules equal with that to be found in a cubic meter of wet air, the only fact to do is to compair the molecular weight of the gases carried by the two cubic meters of air. In the dry air there are nitrogen molecules with a molecular weight of 28 and oxigen molecules with a molecular weight of 32. In the wet air there are many water molecules with a molecular weight of 18. As for every water molecule present in this cubic meter of wet air we must eliminate a nitrogen or oxigen molecule both heavier than the water molecule - in order to maintain the same number of molecules in the volume - it is easy now to see that the paradox changed in reality.

Everybody consider a perfect normal matter, though paradoxal, the lifting of fluids into the capilar veins, a phenomenon under the law of Jurin (11). But who is responsible for lifting of fluid column? In theoretical point of view this is happening at the expense of pulling out energy from just its own source. Under the effect of capillary pressure it takes place an energetic variation which produces the necessary work for lifting the fluid in capillar with the suitable cut of temperature. Practically in this manner is going the matter, but to put in evidence the two phenomena i.e. the mechanical work apparition and the reduction of temperature, a very fine apparatus is needed.

Either our body isn't protected by paradoxes. One of them is the apparent paradox of blood capillar circulation. Smaller is the inner diameter of a vein, higher should be the blood velocity. Here lays the paradox because in reality the things are upset: in the thiner veins the blood circulation is slower and slower. In the human body the capillar veins have a total lenght of over hundred thousad kilometers and a total section of eight hundred times higher than the section of aorta. In this case the velocity of the blood in capillars would have to be eight hundred thousand times smaller than in aorta. In reality it is one thousand times smaller, on the one side due to the section and the lenght of the capillars, on the other side due to the viscosity of the blood, the effect of friction on the walls and due to the adhesion of a part of the blood at the walls of the veins. The reduced velocity of the blood along the capillars allows the passage of the oxigen and nutrient substances from the blood into the tissues and cells and in a reverse sense the elimination of the carbon dioxide and of other substances (11).

Another paradox of human body is the fact that the presence of hydrochloric acid in stomach, secreted by the protein alteration, doesn't digest the stomach too, though it is secreted 1,5 litres of hydrochloric acid in 24 hours with a pH=1,5-2,2, that is a concentrated acid. The same human body solves the paradox by the help of piloric glands which release mucine protecting the wall of stomach against the action of the hydrochloric acid (11).

Some substance can be found in two izomeric formes (enantiomeres) so-called L (levo) and D (dextro) forms; the enantiomere molecules are, one - in mirror-image of other. These two forms exist for every aminoacid with a single exception. It is extraordinary to notice that in nature the proteins are built as a whole from L - aminoacids. "This is a great enigma", wrote Linius Pauling in his treatise on *General Chemistry* (23). Today nobody knows why we people are built from L - aminoacid molecules and not from D -aminoacid ones. All the proteins analysed so far, available from animals and plants, from more developed organisms or more simple ones - bacteria, mould even viruses - were proved to be formed from L - aminoacids (...). The Earth

might be populated by beings built from D - aminoacids as now is populated with beings based on L - aminoacids. A man who suddenly would become his own image of a mirror at the begining wouldn't know that something happened in his manner of life, excepting the fact he would write with the left hand instead of his right, the hair would have the parting on the right instead of the left, the heart beats would point him the place of heart on the right side not on the left side; he could be able keeping on to drink water, to breath air by using the oxigen for the oxidising processes, would expire carbon dioxide and would accomplish other functions very well as before - till in the moment of feeding. If he would eat vegetal or animal normal aliments", he would see that he couldn't them to diger. A footnote of the author says us that Lewis Carroll had felt this thing in his book *Through the Looking-Glass* (1872) (a continuation of *Alice in Wonderland*) where Alice says: "May be the milk from the looking-glass is not good to drink". And Linus Pauling goes ahead: "He would be kept in life only with a dieta consisting in synthetic laboratory made D - amidoacids. He couldn't have children - excepting to find a wife who would have been exposed to the same reflexion process is a mirror as he was. One see the possibility the Earth would have been populated in the beginning with two independent types of life - plants, animals and human beings of two types from which one type couldn't use the food of other type and the possibility of apparition of some hybrid successors would have been excluded (...). But I don't know ... why the beings were born and developed in the L system and not in D system". If the phenomenon is due to hazard or of a determined fact which escaped to science is an aspect of the problem, but is sure the fact that we are facing a troubled paradox which remains unsolved, the man regarding himself in an imaginary mirror and asking himself if he is not a hero of a fiction.

Before the Would War I the English physicist James Chadwick (1891-1974) performed research works in physics in the laboratories of Germany. He brought to light a paradoxal phenomenon. (11). In comparison with the alpha particles, which at emission had the same energy, the studied beta particules manifested very different values, from zero to very high values. As the emitted nuclei kept the same energy level, after and before the emission, the problem was where is lost the difference of the energy, from the level the beta particles had it by emission till the maximum level they might it have ? Bohr declared that in the case of beta desintegration the law of conservation of matter is useless, and W. Pauli in order to save the law, proposed the existence of some "neutrons" emitted simultaneously also in the form of beta particles, responsible for the energy difference posed under the question mark. Later, when in 1935 Chadwick discovered the neutron, Enrico Fermi elaborated in 1934 the theory of beta desintegration, and gave to the supposed particle of Pauli the name of neutrin. It was a theoretical discovery because the neutrin escaped to any experimental observation, this particle refusing to react with the matter. Hardly in 1955 the physicits C. Cowan and E. Raines captured the neutrin in to a reactor insolated with a thick mantel of concrete surrounded by a container filled with hydrogen.

The Earth contains a great quantity of uranium and it is a paradox that it didn't fall a victime of a chain reaction as the result of an atomic explosion. It is knowing that from the fission reaction of an uranium nucleus hit by a neutron derives three neutrons. These neutrons by hiting other three uranium nuclei release 27 neutrons. At the twentieth fission process appear over three billion of neutrons. A single kilogram of uranium would release an energy of $24 \cdot 10^6$ kwh developing in the centre of explosion a temperature of fifty million Celsius degrees and a pressure of some trillion atmospheres. However the Earth doesn't burst though it owns thousand tones of uranium. Because the natural uranium has three isotopes and the chain reaction can bé provoqued only by one of these isotopes which can be found only in a proportion of 0.71 per cent from the total, because not all the escaped neutrons are capable to prbduce fission and are lost, and finally, because a chain reaction doesn't begin unless in the same place exists a minimum quantity of uranium necessary to

burst. This minimum quantity ensures the chance for the released neutrons to meet other nuclei of uranium in this space and not losing in the exterior, if the mass of uranium would be under a limit called in the nuclear physics as critical mass. Our existence on the Earth is due also to this paradox whithout exit (11).

The nature of the light is linked also by a paradox . Newton, in his report from 8th February 1672 at Royal Society, considered that light is like a real matter with a corpuscular structure of the same nature as matter. Huygens developes the ondulatory theory of light (1690) whereafter this is formed by elastic waves which are spread in ether. The light corpuscles will become at the beginning of our century light quantums, respectively photons (Planck). The new theory of the nature of light is that of corpuscle, wave (CW), based on the corpuscular and ondulatory aspect of photons, aspect characterized by complementarity (Bohr). But the corpuscle and wave are paradoxes, in the logical point of view, which we "must" accept because it reflects the reality (24).

Does exist a paradox of the photon from the centre of Sun (11) whereafter for this kind of particle it is needed five thousand year to cross the way from the centre of the star till its surface, due to the high density of the condensated plasma from its composition and the zig-zag like way carried out caused by the countless impacts with the other existing particles.

In conection with this topic exists also a paradox given to the velocity of light. A body which would reach in the space the velocity of light would have an infinite mass, that would need an infinite power to perform the required acceleration. Such a giant mass would exert gravitational actions of infinite dimensions on all the bodies of the universe, and in conformity with the dimension contraction formulae, the length of the body - in the sense of its displacement - would be shortened at zero value, what means zero for the volume too. An infinite mass in a volume equally zero is a paradox (11) impossible to imagine, and the situation leading to paradox is impossible.

The logic - mathematical paradoxes

The series of paradoxes from the field of science shown in these pages represent only a part of the countless contradictions of the science which are in the phase of antinomy or paradox. The above mentioned examples aim at understanding how much is spread the paradox in all the branches of science, how this watches from unexpected situations and places, how the paradoxes stimulated the thinking for progress - as it happened with the irrational numbers - and finally, how the extention of the human knowledge about the world, according to the science progress, decides that many of paradoxes become plain errors.

And in spite of these all the field of paradox doesn't narrow, its surface of action doesn't restrict. The paradox continues to appear, to assert its identity, to demand with obstinacy the right to existence, claiming consideration and even legitimation for a proper statute in the logic science. It is a philosophical thinking which promoted and upholds the idea that the antinomy forms even the inner being of the things, that it is the real nature, that the facts and the phenomena of the real world represent the origin of the antinomies. The paradox wouldn't be any more a deadlock of human reason but his revelation through thinking from the world's phenomenology, the mind receiving the logical and the illogical, the indistinct truth and error like something given by the outside reality (Nicolai Hartmann, 1882-1950), a conception sliding with its results into a faultless paradox.

The apparition of irrational numbers and the discovery of the paradox by Zeno created a real crisis in the field of mathematics in antiquity. It seems that Zeno, just if not intentionally, succeded to draw attention on the inner contradictions implying the notions of space, time, continuity, move. They are standing as proof the racks and anxieties of Pythagorean School from the antic Greece. The reaction to this crisis didn't linger to appear with an increase in rigour of geometrical fundaments, what made possible the development of axiomatic theory by Euclid (4th-3rd cen. A.C.), the continuation of this work in the field of practice by the

philosopher Spinoza (1632-1677) and the physicist Isaac Newton (1642-1727) and its perfection in the last and the actual century by Cauchy, Cantor, Dedekind, Weierstrass, Zermelo, Fraenkel, von Neumann, Bernays, Hilbert and other mathematicians and logicians.

One of the concepts that gave much trouble to the philosophers, logicians and mathematicians was that of infinite. For the antiquity the Zeno's paradoxes stand as evidence. Regarding the paradox of arrow Aristotele objects: "Zeno commits a paralogism. Every body is in any *moment* in repose or in move - says Zeno - and it is in *repose* when it is laying in a space equal with itself, and it is in *moment* always when it is moving, and as a result the transported arrow is always immobile. But it is false, because the time isn't composed from individual parts, the same as every other size". In Achilles and the turtle, Zeno divides into fragments the Achilles'effort in his pursuit of the turtle into an infinity of successive moves and in the same time the given period is finite. Due to the infinite divisibility - in the dichotomic paradox - the mobile need an infinite time to cross this infinity of segments.

Once we reached this point it is necessary to make distinction between two types of infinite: potential and actual. The first, *potential infinite*, upholded by Aristotle, was took in a good account in the mathematic analysis by Leibnitz (1646-1716) and Newton (1642-1727). Aristotle ascribes to infinite the quality of potential, a size *in course of becoming* higher and higher or smaller and smaller, without reaching ever its wholeness. It is like they could see in a block of marble a statue in potentiality (25). The potential infinite is formed by a series of natural numbers which can be obtained by adding at the previous definite numbers always a unit and in this way the series can be lengthen no matter how much towards the infinite. The segment - from the dichotomic paradox - of finite length can be considered as an infinite in potentiality which can be crossed by a mobile in a finite time. If one make abstraction of the finite segment and one take consideration the infinite set of fragments in which the segment was divided, respectively *the actual infinite*, in his boundlessness not a single mobile could cross him in a finite period. Therefore in the actual infinite the set appears like a whole and boundless thing.

The actual infinite proved itself contradictory, an inevitable source of paradoxes therefore absurd. Even the infinite set of natural numbers appears as paradoxal in certain points of view.

With this type of paradox one enters in the domain of logical or logic-mathematical paradoxes, by logic being understood the science of demonstration which has as object the establishment of the condition of the corect thinking of types and of laws for veridical reason, and by logical paradox, a formal contradictory construction impossible to be avoided. And the logical and logic-mathematical paradoxes represent actually the source from which the paradoxism of yesterday and of today will take substance.

Galilei (1564-1642) in his work *Dialogues on the new science* brings in evidence a paradox by setting Segredo to ask himself worried, how could be explained the fact that the set of perfect square numbers - 0,1,4,9,16... - though represents only a part of the natural number set, is at its turn infinite? In like manner in mathematics exists the apparent paradox that permanently appear much more new unsolved problems than the solution given to the old ones and so remain mathematical problems which will be never solved.

This paradox is repudiated by W. Sierpinski who upholds that if the mankind will exist during an indefinite period of time, every problem will reach to be solved. It is exactly the paradoxal situation of Laurence Sterne's (26) hero Tristiam Shandy who by writing his memoir - and being meticulous - it needs him a year to describe his deeds and events experienced in a day of his life. In a common finite life it is clear that he wouldn't succeed to relate no matter which of his life days, but in an infinite one, he will put relate every day of his life.

Gauss (1777-1865) appears anxious - in a letter adressed to a friend - about the attempts to introduce the concept of infinite in the mathematical reasonings, next to the finite

size, expressing the hope that so long the infinite will be considered and regarded as a limited thing it will not create contradictions.

Shortly after this letter issued the posthumous book of the mathematician Bolzano (1781-1848) *The infinite's paradoxes*. In this work one can find countless paradoxes fror. which we remember a few. It is brought anew the Galillei's paradox in which a part of the infinite set is equal with the whole. A paradox refers to the case of a straight line on which there are so many points as on a plane or in the 3D space. Another where there are so many points in an area as on a segment. Another paradox refers to two concentric circles which are composed from equal sets of points. The demonstration of this paradox is carried out by drawing the radii from an outside circle towards the centre so that the straight lines meet the pair of points situated on the inner concentric circle.

At the end of the last century Georg Cantor (1845-1918) introduced in mathematics the set theory based on the same fundamental notion of infinite. The Cantorian theory of sets, of the actual infinite, of transfinite sets - respectively a lenghtiness beyond the infinite of the finite numbers - triggered a strong crisis in the modern mathematical fundaments, some of mathematicians adhering to this theory (Poincaré), other retracting after its acception (Dedekind). But the new ideas asserted oneselves and triumphed. At the First International Congress of Mathematicians in Zurich (1897) the set theory was recognized unanimously. "From the Paradise created for us by Cantor nobody will be able to get out" exclamed the mathematician David Hilbert. But the philosopher and mathematician Bertrand Russel will answer: "The Universe isn't a set; the Cantorian paradise is touched by a limit. Because the Universe is characterized by the fact that it owns every object".

And just in the years when Cantor finished the fundation of his theory, like "without reason"(27) appears the paradox of Burali-Forti threatening the stability of the whole theoretic cantorian edifice. It is knowing from the set theory that every series of ordinal numbers - well ordered after the size of number - defines an ordinal number which is with an unit higher than the highest ordinal number of the considered series. If one takes in consideration the series of all ordinal numbers, this series defines an ordinal number - noted with Ω - the highest from all the ordinal numbers. In this case the series of all ordinals contains the ordinal number Ω defined by this new series - of all series - and so the ordinal number defined by it isn't Ω but $\Omega+1$. The contradiction is obvious: the highest ordinal number isn't the highest one.

In short time the set theory - today laying at the basis of all the chapters of modern maths - proved to be itself the source of some paradoxes. Starting from the definition by which the totality of the elements of a finite set bears the name cardinal number and in the case of infinite sets is named power, Cantor himself established a paradox in the year 1899 published by Zermelo in 1926. Let M be the set of all the sets and N_c its cardinal number, the highest cardinal possible. In conformity with a theorem of set theory, the cardinal number of the set of all subsets to M is higher than the cardinal number N_c of a set M. The contradiction is again striking; more simple one can say as follows: comparing to any set, either infinite high, there is a set even higher. But if for every set there is one more higher, what is happening with the set which includes all the others?

Till Cantor the sets were considered as undiscerning things in their wealth point of view. The diagonal procedure - whose presentation isn't important here - shows the existence of an infinite hierarchy of "degrees of infinity", in whose framework the poorest infinity is the set of natural numbers, what appears paradoxal. The set of numbers between 0 and 1 is higher than the set of natural numbers, and therefore the continuous infinite is more wealthy than the discrete one.

At the end of the last century the set theory some famous mathematicians were delt with. The research works were carried out around the natural integer number whose set was established by the German mathematician and logician Gottlob Frege (1848-1925). Bertrand

Russel studied this problem in parallel and though he reached the same definition of natural integer number, he perceives the paradoxal character of the notion set for all kind of sets. He owns a paradox which became famous. In order to understand this paradox some clarifications are needed. There are sets with the same nature like their elements and to contrary, sets whose nature isn't same with their elements'one. For example, the set of all abstract sets is itself an abstract set, accordingly it is contained as its elements. The set of determined notions is also a determined notion, therefore it is contained as element of the set own. The set of prime numbers isn't a prime number accordingly the set isn't contained as element, as in the same manner the set of all the people isn't a man and therefore either the reproduced set isn't contained as its element. All the sets which are contained as element form the set G and the sets which aren't contained, as element form the set T. There are only two possibilities, the third doesn't exist. The paradox begins here, because in the case of *tertium non datur* (Γ) the set Γ must be or not be contained as element. If it is contained, as it can't contain - by its statute of Γ - only sets which aren't contained, it isn't contained itself as element; if the set Γ isn't contained, as it contains all the sets which aren't contained, it is contained. The set Γ emplies the absurd and the paradox is obvious.

Russel too obtains a similar paradox without using the notion of set. He considers a certain predicate and the question is asked if it has character which it denotes and this type of predicate will be named predicable; if the predicate has not denoted character itself will be named impredicable. For exemple, the abstract predicate is itself abstract, being therefore predicable, in the meantime the vegetal predicate isn't itself vegetal and therefore is impredicable. Accordingly the predicates are either predicable or impredicable, *tertium non datur*. How is explained this logic in the case of the impredicable predicate, which obligatory or is predicable or is impredicable? If *impredicable* is predicable i.e. admits the character denoted by it, it is accordingly impredicable; if *impredicable* is impredicable i.e. doesn't admit the character denoted by it, it is predicable. Russel shows that the logical structure of the mathematical paradoxes established by him have the same configuration as those of Parmenides'paradox, what one can confirm, by revising the liar's paradox, in this likeness being once more a proof that many of essential elements of the modern logic originates in the antic thinking. In the same manner, as truly asserted Goethe:"All it is now hiding in the world / Once was said again". Russel let Frege - the founder of logic mathematics - to know in a letter his paradoxes. Frege gave in printing his work "*Fundamentals of arithmetics*". He printed the book by adding on the last page the following note: "Nothing is more painful for a scientist than to see the basis of his work ruined just in the moment in which he considered it finished!" (28). And concluded:"The arithmetics will perish". The Russel's paradoxes have a similar construction as the type of paradoxes which will be presented in the following.

The English mathematician P.R.B. Jourdain in the year 1913 imagined a paradox. He wrote on a sheet of paper the following proposition: "The statement on verso is false". On the verso it was written an identical statement. What situation is between the two propositions? "The situation has a selfreferential character" answers the mathematician M.Gardner. But what means selfreference? An example is wellcomed:"The present statement is false". One can notice that the form of this statement is identical to the liar's paradox but in an up-to-date form. If the proposition is true, like the text, the statement is false. If the written things are false, it is true the negation of the text and therefore the statement is true. It is a selfreferential antinomy: the statement is refering at its apparition on the sheet of paper. In the same manner saw M.Garner too the statements of Jourdain. But P.Huges and G.Brecht assert: "Separate taken every statement it isn't selfreferential" - and that is, we add, because every statement doesn't refer to itself but to the other statement on the verso - "accordingly it isn't antinomic. But the entity of the two statements is antinomic and selfreferencial". If we take again the analysis, the statements are contesting reciprocally, therefore we are in the

presence of a paradox. As the statements don't imply reciprocally, it isn't an antinomy and nor at least a semiantinomy. In the case of sheet with false on both sides we don't know which of statements is true and therefore it is impossible to take a decision. Any decision though correct in itself is inseparable by its own contradiction. Every statement contains a truth about itself, ascribing to the other the false, contesting its and by this strenghtening its own truth.

A variant of this type of paradox is that of the American writer Norman Mailer who during his talk with his girlfriend notes in his notebook the idea about... the writer who during his talk with his girlfriend notes in his notebook...

A version of Jourdain's problem is that proposed by Valdis Angskalns (1970) who replaced the sheet of paper with the statements on a Moebius tape where the distinction between the two sides disappears. The Moebius tape is a strip of paper having the width of three centimeters, whose one end is twisted with 180° and then is glued with the other end, resulting a twisted ring. When the tape is cut along the middle line we obtain not two rings as we are waiting but a single ring two times longer. The Moebius tape is a challenge for the distinction inner / outside and eliminates the idea of face and back.

Also Russell together with A. Whitehead tried to settle down the set theory on a more solid ground by the elaboration of type theory destined to hinder the apparition of paradoxes. It is the first attempt, after those of Middle Ages' philosophers and mathematicians, to come out from the deadlock provoqued by the paradox. Russell realises that paradoxes aren't connected directly to the ideas of number and quantity, that they belong to the intimate nature of the logic formalism, that they have a common characteristic based on the principle of vicious circle, i.e. of a situation in which is permited as possible arguments for a propositional function even terms supposing the function itself. Paradoxes touched obviously by the principle of vicious circle are those of all the sets which aren't contained, of the impredicable predicate both Russell's own, of the selfreferencial statements which are acknowledge as false of Jourdain's own and even the barber's paradox, the popular version of Russell's paradoxes.

In order to avoid the consequences of the principle of vicious circle which generates paradox, Russell divided the concepts and the characteristics in types. *The individuals*, respectively the individual objects i.e. what isn't a characteristic, into the type theory they are the concepts, respectively sets type 0. *The characteristics of the individuals* are concepts type 1. Therefore a set type 1 is that in which its elements are from the set type 0. *The characteristics of the properties of individuals* form the set type 2. A set type 2 has the elements from the set type 1. The books are from the set type 0. The library is a set whose elements are the books which belong to set type 0. Russell imposes to every set to belong to the type immediate superior to those of its elements. "The cube is red" is a true or false proposition: but with sense. The sense is offered because the object - the cube - of type 0 belongs with the superior set type 1 of the characteristics. The membership relation doesn't manifest any more among the sets of the same type. "The triangular is red" is a proposition without sense, both terms belonging to the type 1. In the type theory an entity like a set which is contained itself as element is avoided. The restriction introduced by Russell by the yape theory avoids the paradox but doesn't show the logic mistake which lays at its base.

Trials to come out from the deadlock introduced by the type theory were made by numerous researchers. Ramsay divides the well-known paradoxes in two groups: those based on mathematical and logic notions and those of semantic nature. But the paradox of the sets which aren't contained, belonger of the first group of Ramsay is of the same type as the impredicable paradox or those of Richard, which belongs to the second group of Ramsay, which makes from the Ramsay's classification a plain trick "which doesn't determine any progress to solving the paradoxes". (29)

Rudolf Carnap makes a step ahead by developing a coordination language - the

language II - in which the expressions of this language don't put into works objects but coordinated "places". A. Tarski introduced the infinite language hierarchy based on a primary language or of order 1 (the dog bites) which can't be confused with the language having as object the language order 1, accordingly a metalanguage or language order 2 (the word dog don't bite), and the discussions about the language order 2 will take place in a language order 3. From this comes to light that the values of truth and of false can't be rigurous defined in the same language but in a metalogic language, otherwise one can reach the paradox.

But the metalanguages appear for T. Ghideanu (30) as the result of "the incapacity of a formal language (theory) to make decision over the imanent values of truth (...) the concept of the superiority of a metatheory over a certain theory being centered on a fundamental paradox, the use of the same principles, rules, definitions as well as of the «poor theory» which annihilates the superior capacity to make decision".

J.E.L. Brouwer and A. Heyting main exponents of the mathematical intuitionism, start from the idea of rejecting the actual infinite and of exclusively recognition of the potential infinite as like the admision with restriction of tertium non datur principle, because its use in the zone of infinite leads to paradox. If a proposition may be true or false into the zone of infinite, this doesn't mean that in this zone a proposition which isn't false is going to be true. The absurdity of absurdity doesn't imply the truth (but viceversa is valid). Restraining the application domain of the principle, Brouwer hoped to eliminate the paradox of infinite.

More solutions were given also by other researchers. Behmann proposes the replacement in the definition of the definisant with the definit. For the definitions which generate paradoxes it must avoid the above substitutions and asserts that isn't permited the introduction of a symbol by a single definition, only in case of its replacement with the signs which helped at its definition total effectable. Perelman focuses his attention on the sign of equivalence from the logic equations.

Alonzo Church introduces a restriction in the principle of excluded middle by which for certain values of the variable X the proportional function F(X) can be neither true nor false. W. Ackermann develops a logic independently of the type theory, where the expressions *with sense* are rigorously defined and therefore the expressions *without sense* generating paradoxes no more can appear.

It was found by Hao Wang and Mc. Naughton that the type theory doesn't hinder the formation of "nonpredicative" sets defined with the help of the totality from which they belong as members. It has appeared a branched theory of types, the new difficulties led to the reductibility axiom of Russell - which asserts that if a certain charasteristic of an object suits to an object collection, then exists a determined predicate which suits to the same collection - and later to other axioms (of infinite, of selection) and always new theories.

Either the type theory and the axioms which fulfiled the role of some counterforts at the construction of Russel as the theories independent of this didn't succeed to hinder the apparition of paradoxes. These continued to appear with all the offensive conducted by a large group of mathematicians.

The problem of paradoxes attracted also the attempts of axiomatization of arithmetics, respectively to create a formal system modelling arithmetics. Euclid - twenty three centuries ago - axiomatised the elementary geometry. He formulated ten axioms, primary propositions - statements related to concept derived from an anterior experience - from which through logical reasonings he demonstrated 465 theorems. A formal system includes therefore a vocabulary, building rules of formulae, a number of axioms, deduction rules and demonstrations, where in the last line is the statement of the theorem. The axioms - derived from the concepts - transmit to the theorems the truths which are kept in system. But the preservation and the transfer of the truth is a complex process accompanied by difficulties. Therefore the main demand is *consistency* i.e. lack of contradiction. This means inadmissibility in a system of the axioms of two statemens of the form A and non-A; i.e. in a formula it is unacceptable

the existence of a theorem and its negation, both claiming to be true. This demand bears also the name of *noncontradiction principle*.

The existence of paradoxes has imposed a new demand namely the completeness. This means that in the case of a given formula or this or its negation is true and it is constitute into a theorem. In this case it is said that the system is complete. An axiom system is complete if - keeping unchanged the set of the system terms - it is impossible to add its new independent axiom (31). In conclusion, a system can be considered formalised when it is uncontradictory and complete. From the axioms one can deduce an infinity of theorems; therefore doesn't exist the possibility to evidence them in a complete list in order to face them together and to discover consistency. No matter how many theorems would be available one can't reach to know the consistency of a system. As like can't be demonstrated the consistency of a system, in the same way it is impossible to demonstrate also the completeness of an axiom system even if would be possible to test succesively every proposition. This truth will be reached a little later on another way.

The attempts to axiomatise the arithmetics respectively the mathematics belong to many mathematicians as M. Parsch (1882), G. Peano (1889), David Hilbert (1899), P. Bernays (1922), E. Zermelo (1928), A. Fraenkel (1930), J.V. von Neumann (1931) etc. The new axiomatic theory of set was oposed to "the naive theory" of Cantor. David Hilbert raised the geometrical axiomatic at a rigurous superior level. The false faith that every paradox can be hindered through a suitable selection of the basic proposition of a theorem was attained.

For example, David Hilbert considers that the origin of the paradoxes doesn't belong to the intimate nature of mathematics but to the abusive use of some doubtless methods. He divides the classic mathematics in two domains: a real domain of *finite* configurations with concrete signs and the ideal domain formed by "ideal structures", formulae and symbols without objectiv significance, with operational rôle, which simplifys our reasonings on the concrete, finite objects. As a supporter of the finitism Hilbert upholds that the infinite hasn't an autentic reality, because nowhere it can be found in the reality. The infinite totalities are plain fiction and the statements about these type of totalities haven't a proper, independent meaning. The proper existence can be ascribed only to finite element,. This autentic reality is exclusively the finite part of the mathematics which can be completed with "ideal structure". This extension from the real to the ideal domain must be accomplished by pursuing the avoidance to introduce contradictions. He introduces the idea of metamathematics - a mathematics of order 2, respectively a mathematics about mathematics - in which the statements are endowed with sense and in which the main preoccupation is to establish if a system considered formal is or isn't deprived of contradictions. Therefore the principal aim is to find out an absolute noncontradictory demonstration. Hilbert and Bernays too delivered absolute noncontradictory demonstrations for certain restrained formal systems as well as that of aditive arithmetics or of calculation of propositions with a finite member of variables. Hilbert tried even a complete formal and consistent system for the entire classic mathematics. It is an axiomatization programme of mathematics consisting in a consistent demonstration of finite mathematics, completed with the ideal structures, well-known by the name of "demonstration theory". But in 1931 the young mathematician of 25 years Kurt Gödel launches one of the most courageous challange in the modern mathematic philosophy. Starting from the situation of paradoxes, and considering the existence of some impediments facing the *complete* knowledge Gödel has the "genius intuition of vanity" (32) of formality, elaborating his theorems of *incompleteness*, in conformity of which in the logic of order I a formula is universal valid if and only if it is logically demonstrable. The characterization of the completeness is the following: a theory is defined as complete if and only if it can't introduce a new formula in the theory which can't be derived from its axioms, eventual with the help of definitions, and, a theory is (formal) complete if it can't be extended without contradictions (17). In conformity with these theorems every formal system proposed by

Russel and Whitehead - is necessarely *incomplet* - respectively some theorems of arithmetics will remain outside of the considered formal system - from which derived the idea that in the main formal system (Russel, Zernelo-Fraenkel- von Neumann) or related to, exist plain *pro*blems which can't be demonstrated.

The idea of demonstration starts from one of the paradoxes of Jules Richard (1903). If one build a list with the characteristics of whole numbers, the definitions can be put in increasing order after the number of letters from the contents of every definition. Every definition d_i will have a number of letters n_i (where $i = 1,2,3,...,n$). If n_i have not the enuntiated charateristic by d_i then it is agreed to say that n_i is a rachidian number, and to the contrary it is nonrachidian. For example, figure 14 is associated to the characteristic of even number. But 14 is an even number, therefore it is nonrachidian. It appears a new characteristic of whole numbers, that to be rachidian, and to which, in conformity with the above hypothesis a number n_{ir} is attached to it. As the natural numbers are rachidian and nonrachidian the question is asked: is it n_{ir} rachidian ? If the answer is positive, accordingly n_{ir} would be rachidian, it have not the characteristic which was associated to it; but this associated characteristic is just that to be rachidian, therefore n_{ir} isn't rachidian. If the answer is negative, accordingly n_{ir} isn't rachidian, then it possesses the associated characteristic and then it is rachidian. Shortly, when n_{ir} is rachidian then it isn't rachidian, and vice versa, when isn't rachidian just then it is rachidian. Because the principle of noncontradiction is unobserved an antinomic paradox appears. But on the way of this statement an interference between two domains is commited: the one mathematic and the one metamathematic. The list of whole numbers with their characteristics and attached symbols belongs to the field of mathematics. But the characteristic to be rachidian receives a sense beyond the list, it is a characteristic of whole number set arithmetics, accordingly it is a metamathematical characteristic. Here is the origin of paradox, in setting the sign of equality between the object language based on the number arithmetics and the metalanguage used at the *analysis and the interpretation* of the object language. The Italian mathematician Giuseppe Peano (1858-1932) writes that "The example of Richard doesn't belong to mathematics but to the language" and gives to the paradoxes of this type the name of "linguistic antinomies".

Gödel takes notice of the dangers watching him in his tentative to formalize the arithmetics, a job which meant to transpose his metamathematical statements in arithmetical formulae of the studied object language, sliding into the situation of Richard's paradox. Gödel creates a formal system in which the set of symbols, axioms, theorems and demonstrations is represented by a set of *prime* numbers which will form the *Gödel number,* the respective correspondence being known by the name of *Gödel counting*. The present work will not develop the building technique of these numbers, but will underline that by this artificial technique Gödel superposes the metalanguage of arithmetics over its object language, because the metamathematical statements from the formal system are to find again in the arithmetical statements.

If Richard associates directly *natural* numbers to *metamathematical* statements, Gödel associates *prime* numbers to some mathematical symbols and statements, respectively *arithmetical* which "by their intuitive contents or by interpretation become metamathematical statements" (33).

In connection with the incompleteness theorem Mario Bunge shows that in the formal science the *completeness* may be abandoned, but in the *factuel science* this is undesirable. A complete formal theory can't develop any more by acceptance of formulae from its exterior. Therefore the incompleteness is compensated by the growth capacity, respectively by the opening towards the recent experience and an incomplete theory - like every consistent factuel theory, rich and whose deductive resources are those of classic logic - and will be able to face every related problem with itself (34).

Gödel still shows that, in comparison with any arithmetical formal system, there are

propositions which - based on deduction rules from the frame of system - can't be nor demonstrated nor infirmed, being named undecideable. Mathematics is facing with numerous undecideable theory like Peano's arithmetics, the system Z of Hilbert-Bernays - which would allow the solving of some problems like that of Fermat - the calculation of the predicates of the first order, the theory of rational numbers, the group theory etc. In these conditions doesn't set anymore the problem of axiomatization of entire mathematics but only of certain of its parts, a matter in course of trial at present.

As regards the paradoxes in comparison to the type theory and of related theories which proposed the going out from paradox by restrictions respectively the limitation of the activity domain, Gödel proposes its abandon respectively of the formal system, the absence of paradoxes being paid with the incompleteness of system. Even the proposition "The system doesn't contain paradoxes" - the statement expressing the consistence of the system i.e. lack of contradictions - can be demonstrated only by using outside means to system. If till Gödel the paradox was a negative phenomenon, together with his theory the paradox becomes an inevitable sign of formality limits (35).

With all progress accomplished by Gödel in the axiomatization domain the paradoxes continued to appear in the period when the mathematicians strived to unravel its tangled thread and after that.

The paradoxes of modern sciences

In the domain of science the paradoxes will pursuit on the way of their evolution. One of the paradoxes is that of von Mises or the probability paradox in which a tennis player have to choice between two tours: one at London where the probability to win is 0.9 and other at Paris where the value of the probability is 0.6. Which is the probability for this player to win the first place - any - of these two tours? Apparently this probability is the result of the addition of the two probabilities, but this result is absurd because its value is 1.5. Correctly the result derives from the following calculation: $p = (0.5)(0.9) + (0.5)(0.6) = 0.75$ where 0.5 is the probability of participation in one of the two tours.

The modern physics brings to evidence some celebrated paradoxes. The style belongs to W.Heisenberg (1901-1970) and bears the name of principle of uncertainty in conformity of which in atomic domain it is impossible to know simultaneously the position of an object - for instant an electron - between the limits of a certain given distance and its impulse (velocity) because when the position of the electron is going to be determined the control of the velocity is lost and vice versa.

The paradoxal situation in the case of the uncertainty principle can be understood starting from the phenomena taking place in macrocosmos or from our experience on large objects, whose displacement we can watch visual or by other means without affecting their evolution. Though without an absolute precision the astronomers can calculate the position of planets for a long period ahead, from observations on their position and velocity taken relative to Sun. If one measures for instant the temperature of a cup of coffee with a bath thermometer (Gamow) the indicated value will be smaller than the real one because a part of the heat is absorbed by the thermometer. In order to measure the temperature of an alive cell it is needed a miniature apparatus which shouldn't modify the proper caloric level of cell. At atomic level our possibility to know the state of a system is limited: we know in a given moment that a particle has a certain energy but we don't know when was this moment and this uncertainty increases with the precision required to measure the energy (36). In the world of atoms never is possible to determine the influence caused by introducing measuring apparata. Taking into account the errors of instrument, method and observation, the coordinates and the velocity of a particle can be determined till the value of the Planck's constant, not for lack of adequate apparatus, but because even the motion laws introduce this uncertainty.

The paradox met in literature under the acronym EPR means the paradox A.Einstein, B.Podolsky, N.Rosen, it is a provocation, from 55 years ago, to the science and nowadays is famous. The authors imagine two particle A and B which after a period of interaction are separated. The measurement of the state of particle B - position or velocity - allows the determination of the state of particle A, based on the fact that any modification in the spin of one particle affects the state of the other particle. The thesis came to shatter some of the principles which were staying at the basis of relativity theory: an instantenous change which took place into the two particles supposed the existence of a signal moving about between them with a velocity superior to the light one. The hypothesis set the problem to select one of the alternative: the sacrifice of the relativity theory in order to save the quantum mecanics - a theory which in 1935, when appeared the paradox, was well modeled as theory and based on a probabilistic - statistic vision of the world - or the acceptance of the image offered by the quantum mechanics about an incomplete reality. This paradox brings to evidence the incomplete character of quantum mehanics theory (22) and their authors uphold that if were allowad the complete character of this theory would reach inevitably to contraditions.

There are some paradoxes of the restricted relativity. One of these is connected to the second principle of the einsteinian theory, namely the principle of constant velocity of light, in conformity of which in void, the velocity of light is the same in all the inertial reference systems.

If on a moving ship is a cannon which launches a shell towards the shore, the velocity of the shell will be perceived higher or smaller according the ship is approaching or moving off relative to an immobile observer on the shore. If we replace the ship with a star and the shell with the light emitted by a star would appear that an analogy exists in the case of light as in the case of ship and shell. But Albert Michelson determining the velocity of Earth's displacement, established that the light moving in the same sense with the Earth has the same velocity like the light arrived from the opposite sense. If we note with C the velocity of light and with V the velocity of Earth would mean C-V=C+V. But in the relativity theory the summation of velocities is made in completely other manner than in the classic mecanics, but we will not develop this calculation too long for this work. It is necessary to remember that the light has mass and therefore it bends itself when passes near the gravitational object and also that simultaneously with the increase of velocity increases the mass too, the lenght of the objects decreases and the time on these objects elapses slower. The experiment from 1971 to proof the relativity theory by help of three atomic clocks - one stationary, and two fixed on two jet aicrafts flying in opposite direction around the Earth - taking into account the gravity influence, altitude and velocity - led to the results which proofed to be those deriving from the einsteinian calculation.

The most famous paradox of the restricted relativity is known under the name of traveller's paradox by Langevin. It is an interesting situation that could be happen in the case of two twin brothers Paul and Peter. They lived together in the years of childhood and youth, and then French physicist Paul Langevin (1872-1946) separated them - in his famous twin's paradox - by sending Paul in a space travel by a rocket as far as Sirius star whereafter he returns on Earth. Paul finds again his brother much older than he himself became after this travel. In fact everybody who leaves the Earth travelling by rocket the interplanetar space with a velocity under that of light, after a year of travel, meeting a star and surrounding it, returning in the next year, will find again the Earth grownold with about two centuries.

After the Peter's clock, remained on Earth, the time in which the space ship travels as far as Sirius and back - supposing it's moving uniform and straight - is of about 22 years. After the Paul's clock, the travel time, calculated with the help of Einstein's formula of time dilatation, is 13 years. Paul will come back on the Earth "younger" than Peter with a difference of 9 years.

Peter's sensation is that Paul's clock goes slower than his one and as a result their vital

processes unfold different: Paul's heart bits slower, the metabolism is slowed down. During his travel Paul doesn't record something abnormal sensation, but at his return he meets Peter grown old with nine years compared with him.

The above mentioned event is considered and "named «paradox» only by those who believe that the principle of relativity means that whichever motion is relative" (Feynman). The paradox analyses two different situations in physical point of view with the same criteria using the theory of restricted relativity applicable to inertial systems moving in a uniform motion. It is knowing that for the bodies laying in a state of repose is valid the Euclid's geometry. Peter is laying on the Earth in a state of repose therefore in an inertial reference system, respectively when over him doesn't act any inertial force. But Paul suffered some strong accelerations at the start, at Sirius'surrounding and at the stop. It is a situation when appears the time concept which Kant locates - like that of space - among the absolute and firm *a priori* categories of the human existence. But Einstein considers the time like o characteristic of matter and with this sense he introduced it in geometry - making a revolution in the contemporany physics too - being understood that the characteristics of time - dilatation and contraction as function of velocity - have an influence on the moving bodies. The Earth and the rocket can't be considered as inertial reference systems, and, because over Paul act accelerations, the rocket becomes obligatory an uninertial reference system, submited to the laws of generalized relativity theory characteristic to the motion of accelerated systems. Over the rocket act the forces connected to the characteristics of the space in which are traveling bodies with acceleration, forces which don't act over the Earth. He who felt the accelerations will be younger. It was established that the mezons μ (miu) too in motion have a thirty times longer life than in repose. Paul too will live more when is moving.

In the frame of a paradoxal theory on subject, respectively the personal alteration, Francis Jacques (1985) recalls about one more twin's paradox, revealed by Zazzo, consisting in the fact that they - the twins - are the last who come to see that they are similar.

An ingenious and in the same time strange paradox is known under the name as Barnach-Tarski's paradox, in conformity of which the surface of a solid sphere - for instant a bowling ball - can be divided in more many parts, which by succesive translation and rotation form a ball with two times higher surface than that of the initial ball. The number of suficient cuts for a such duplication was at the beginning of nine after von Neumann, of eight after Sierpinski and finally of five after Robinson (1946). The paradox persists in 3D and nD space and disappears in 1 and 2D space.

There are some new paradoxes in the infinite domain. One is known as the light bulb's paradox. A light is connected a half minute and then disconected a quarter of minute, then connected anew an eightenth minute and disconnected 1/16 minute. At the moment 2n-1 it is connected a 2n-1th part of a minute and is disconnected for the 2nth part of a minute. The total period of timp of this succesion of on-off is one minute. The question is asked if after a minute the light bulb will be on or off? The question is without response, but opens discussions about the sliding on the planes of even-odd states of the infinity of accomplished operations which goes off to nothing.

Another paradox has as subject the question: could the Allmighty to make a stone as much heavy that wouldn't be able to lift it? Whichever would be the answer, positive or negative, the allmightyness is gainsaid. Appears as unfair to set in competition the Creator and His creation but this thing must be done says Wiener; the paradox can't be explained because is contradictory adds Cowan.

A paradox which introduces in the heart of logic implications and speculations on a large field of thought - shouldn't forget that thinking, says Paul Valéry, is in the last instance an activity whereby makes to live something that doesn't exist - is the paradox of J.St. Mill (1806- 1873) well-known under the name of inference's paradox. It is understood by inference the logical operation of transition from a statement to other one, the last statement being

deduced from the first. The inference's paradox has many formalizations. The more simple would be the following: as a logical inference would be valid, the conclusion should be "contained" in the premises. But if the conclusion is contained in the premises it says nothing to us (37). Therefore how can be, in these conditions in the same time valid and informative the logical inferences? A redondant form of this paradox was stated by J.M. Keynes (1883-1946): "On the one side we must state something new; the conclusion of an inference must be different to its premises and therefore it must surpass their premises. Whereas on the other side the truth of the conclusion must derive necessarely from the truth of premises, and the conclusion accordingly would be contained in a certain sense in the premises." The Romanian logician Petru Botezatu says that this paradox "is a modern form of the vicious circle, but which in this new context doesn't appear as an objection but like an accomplished finding (...) like an invitation to resignation, imposed by the pure analytical character of deduction" (38). The Mill's paradox leads to grave results. He eliminates the deductive process, giving a serious stroke to rationalism. It isn't the place here to bring to evidence the objections brought to the Mill's paradox. But it was reached to the fact that by deduction the conclusion derives from the premises rigurously on the basis of some strict rules and that this conclusion states however something new as compared to premises. Because on one side the deduction is a tautology - subjected to the logic's laws - and therefore is the prisoner of the analysis, and on the other side it posseses an innovative power. Proof is the syllogism with countless examples, as e.g. "All people are mortal / John is a man / Therefore John is mortal". At this the Romanian philosopher Lucian Blaga analysing the Russian spirit completely different, unfolds the specific form of the syllogism in this case: "All people are mortal / Ivan is a man / Therefore Ivan must suicide"

The paradox between the human being and the language

A domain where the paradox is at home is that of the communication. A first paradox starts from the definition of dialogue as a production of two parallel speeches with their segments given by supposed and set up interlocutors. One couldn't join two soliloquies in a dialogue as would plait two hairs, and nor vice versa, one couldn't fracture the whole in two halves of sense. It isn't a single means to dissociate what comes from one side or other side. The non-autonomy of dialogue seems to be a condition of its own, the solution consisting in taking both sides together suddenly. It is the principle of non-separability of linguistic actions which are transformed in the paradox of non-separability, and which first implies that what is valuable for me alone, is worthless and also implies the fact that the communication ceases when one of the interlocutors speakes rigorous in the language of other, what is equivalent with a change of words already communicated, and is equal to the installation and the development of the agreement dregee between the interlocutors, this fact leading to the break of communication.

Bakhtine develops a dialogal paradox. It is knowing that the dialogue is the product resulting from the interaction between locutor and conlocutor, but for Bakhtine in a dialogue it is to a small extent the conceiving of a speech through two real instances and before long the annexion to the speech of locutor that of the partner as like it is imagined or foreseen by the first. Because "every speech is directed towards a respohse and this can't escape to the profound influence of the forseen speech-reply (...). It is determined in the same time by the reply unpronounced yet, but required and foreseen". In the dialogue appears two levels: that of the talk and that of the sense. Namely who speaks and who says? The dialogal paradox consists in the fact that, against any appearance, the locutor can't be mistaken with the statement maker. The paradox is jointed on the fundamental distinction between the voice bearing individual and the person who makes sense. It is an individual who converts himself at person and renounces for a moment at the universe which serves him as medium and for which he is a certain individual, in order to enter a communicative universe where he isn't

the centre any more. If the locutor, that one who is speaking, is the author of the statements too, in the dialogal paradox the statementmaker is destined to share the semantic initiative with the conlocutor that being a co-statementmaker.

The dialogal paradox sets a fundamental stress on the *meaning* and lets in the second place the linguistic superficial description, in this way making a distinction between the locutor and the statementmaker, and treats in a reverse way the current opinion which puts together the speaking act, the act of the sense donor - and consequently of reference - and the engagement of the dialogue. The conlocutor takes part in a certain measure as locutor at the restauration of the semantic isotopy in such a manner that the authors of the sense are co-statementmakers.

C.H. Langford launches a paradox of the analysis. First he defines the concepts of *analysed*, what is subjected for analysis, and of *analysand*, what accomplishes the analysis. He states: "If the verbal expression represented by the analysed has the same meaning as the verbal expression, which represents the analysand, then the analysis is only a banal identity without a sense. And if the two verbal expressions haven't the same meaning, then the analysis is incorrect. As the present investigation goes ahead, increases the adhesion to the idea that the paradox is omnipresent, specific to the nature and jointed to the existence, the man appearing as a paradoxal being, controlled by a "contradictory unity between the phenomenon and essence, between the event and law..." (Henri Wald), that the paradox can't be seen anymore as a contradiction between the reality and thought but like a contradiction between the perceived and reflected reality by the thought. This fact doesn't shade off the question regarding the kind in which the paradox appears as well as the ways to get out of its. As usually a paradox is based on the superposition, the confusion and the identification of two distinct levels of the reality, that of the language, that of the thought, of the behaviour . There were met paradoxes built by the superposition of the metalanguage on the object language, respectively on the closed languages in metalinguistic point of view in the interior of a such a language which itself could be set in discussion.

In this way in the paradox of the heap, of the bald, n is the heap, n-1 is non-heap, the deadlock originates in the fact of a tacit admittance of n resulting from a net separation between n and n-1, what in reality is happening gradually till the heap is formed. In the case of the mathematical paradoxes the contradictions aren't between two mathematical statements but between a mathematic result and our own intuitions strongly affected by the euclidian 3D space of our daily experience. An obvious example of the link paradox-language is represented by the paradox Electra based on the characters of the antiquity. Returned at home Oreste is not recognized by his sister Electra, though she new that Oreste is her brother. Accordingly Electra knows she has a brother Oreste, she doesn't know that the person in front of her is Oreste. One can say Electra knows and in the same time doesn't know that the person in front of her is her brother. The contradiction consists in the fact that on one side Oreste is considered equivalent with "Electra's brother", on the other side Oreste is taken in consideration by his physical attributes.

The meaning process isn't in two dimensions i.e. composed from a fragment of reality - in this case the physical person of Oreste - and from a linguistic expression - respectively the name Oreste, but in three dimensions, explained by American philosopher, logician and mathematician Charles Pierce (1839-1916), the third dimension being of conceptual nature - respectively the mental representation of the person named Oreste. In the paradox, Electra are facing two representatives of the meaning - the expresion Oreste and the person in front of her who is only a sign - in the Pierce's definition the sign being *something* which *for somebody* stands instead of *something else* - both the repressentatives sending to a referent, the person named Oreste. But Oreste isn't recognized by Electra as a referent, respectively as a physical person , but he is recognized by two interpreters, respectively is recognized only as sense, by two representatives: a) "the Electra's brother", and b) a mental repre-

sentative whom Electra realizes in comparison with the person who stands in front of her.

Among the philosophers Kirkegaard granted to the paradox a human, affectionate, passionate dimension - taking it out from the pattern of the logic - upholding that the inner life is developing under the command of certain perpetual collisions, of certain irreconcilable contradictions, the human creature being permanently submitted to the option or - or, the inventory of spirit being charged by absolute differences and antinomies, by bipolar states, hostile, in permanent contradiction and adversity. In every choice the creature is in dilemma, in a rupture of the alternatives, a state of irreconcilable contrariety, in which the final option is a passionate selection between a state or other state of the alternative or - or, accomplished by leaps - without transition or gradually - in the realm of paradox, a selection between real and abstract, between possible and impossible. Because each of the alternatives is contaminated by the presence of the opposite one, the finite relys on the passion for the infinite, the ephemerality has the voluptuousness of eternal, the thought which builds the absolute relys on the relative. The solution for the drama of misleaded and by paradox frightened creature is the faith. For "this is the supreme paradox of thinking, willing to discover something that itself can't it think". This paradox sets face to face the eternal and the infinite, in a finite time and form, The God living as alive. For - asks himself Kirkegaard - what is that unknown which the reason in its paradoxal passion collides with ? "We name (...) this Unknown, God" adds the philosopher. The God is the unknown which collides with the intellect in his passion for the paradox. On one side the trial to demonstrate that exists this unknown which can't be thought is impossible. For if it doesn't exist, it is impossible to demonstrate its existence, and if it exist, it is an absurdity to want to made the proof because in the moment when this begins it is supposed we already know about the existence of this "unknown". On the other side by producing the paradox the intellect has nothing to do with it, for it becomes an object of faith, which is a happy passion, based on the agreement man-God.

The existentialist philosophers bring to light - at their turn - some paradoxes of the inner most nature of the man. The first of them could be named the being's paradox. Whereas the existentialism wants to give the answer to one of some major questions of the philosophy - what is man? - and to advance facts on the *whole* human existence, the undertaken investigations include only *a part* of this existence, the sphere of inner life. From here one slides into the paradox of purpose: the inner most investigation hasn't as impulse the joy of research and discovery in itself but an "odd voluptuousness to associate every insight in depth with the grey banners of living in negation, the density of the cognition act being conditioned by the intensity of the negative and opposite passion" (39). The affirmation of man against the frustrations and the alienation of human being arouses a paradox of the thorn crown, in name of which the way towards the recovery of identity and authenticity is conditionated by negation, by " the nihilistic polyphony of gloomy states - fragility, sadness, despair, disgust, ambiguousness, failure, nothingness, death..." (40) all becoming probatory indices of the authenticity. The cognition of own mind is accomplished by suffering "the unic cause of the conscience" (Dostoevski), because "any thinking is judged by what it can draw out from suffering" (Camus). The lucidity of man is knited with suffering, never with happiness. The universe in which the man becomes "released" the suffering is almighty, and the interrogation on the own mind bears the mark of this presence. This comes near the Buddhist doctrine which will be shown in the following pages.

The German philosopher N.Hartmann (1882-1950) brings to evidence seven aporias for the description of the cognition. In the first apory, fundamental, Hartmann starts from the so-called "principle of the conscience" according to which the cognizant "ego" has conscience only of what is happening in his own mind. But as the object to be recognized exists independently of the conscience, is outside of it, and transcedent it, the question is how is it possible to establish a relation between the subject and the object, everyone being

transcendent one to other? In the paradox of the "conscience of problem", on the consideration that we are conscious of what we know only, how we can become aware of something we don't know yet? And there are here only two paradoxes from the seven ones. These paradoxes appear at present as difficulties facing the reason, some of them unsolvable for the philosophers, the task - conceived as aporetic - being to lessen them and to diminish the difficulty degree (C. Coşman, Contemporanul 1976).

In the year 1934 H.F. Saltmarch, in order to explain the prophecies, proposes the concept of intermediate time. Between the real moment of event apparition and that of its perception at brain level occurs a distance between the necessary time for the information to reach the neurons, the place for decodification and the analysis of the received signals. Thus the perception of nightingale's song or of leaf's fall, retarded relative to the event apparition, leads to the paradoxal existence of two forms of present: one active and other perceived, between them laying an intermediate present, a level at which certain persons can perceive the future, because in this distance, between action and perception, could appear at any time the prophecy phenomenon.

In the year 1908 the German mathematician Kurt Grelling creates the paradox which bears his name. He introduces in logic the distinction between the heterologic and autologic atributes. Any adjectiv which has not property expressed by it is considered heterologic. The word *long* is constitued from a single syllable, therefore it is short and has a property opposed to that expressed by it. *Romaniar.* is a English adjectiv, though it expresses the property to be Romanian. Both words are heterological. The same are also the atributes red, flavoury, infinite, concrete, monosyllabic etc. Autologic is any adjectiv which has itself the property it expresses. Examples of autological words are the terms *short* and *Romanian* (in Romanian meaning) which don't need other explanations. The question that so as to ask is the following: how is heterologic adjective? Is it heterologic or autologic? If it is heterologic, then couldn't have the property expressed by it, therefore would be autologic. If it would be autologic, then it would have the property expressed by it, but what it expresses being heterologic, would result it is heterologic. A dilemma from which one can't go out really. As one can observe this paradox is similar to that of Russel regarding the unpredicable predicate.

At last in connection with the existential paradoxes, here are a few on the "road" gathered by the author at random. The first two are aphorisms belonging just to the "paradoxist" Florentin Smarandache. "If you don't know where are going every road will carry you there. Never look back excepting the case you intend to go on the same road". If all your problems are all right this means you are on a wrong road. Always the departure road is longer than the return one. In the place where everybody want to reach as soon as possible, inevitably the most of them will arrive too late (Lichtenberg). Any exit is an entry in something else (Tom Stoppard). Camus said about the man's responsability to his becoming: "Man is nothing in himself. Is only an infinité chance. But he is the infinite responsible person of this chance". And further: "Everybody of us has the duty to cultivate in himself the maximum chance of man, his final virtue" (41). What is approaching much to the words of the Romanian philosopher Constantin Noica: "Everybody receives at birth a blank cheque. Let him do what he will".

We live in paradox in biological standpoint too. Every twenty years all our human body cells are changed but our looks remain almost the same because a pattern with invariable structure is conserved in every person. We live in an eternal paradox that reveals itself through three questions posed by Paul Gaugin: Who are we? Where come we from? Where are we going? Tennyson said that if we could understand a single flower we should know who are we and what is the world. Coleridge asks him: "If a man crossed the Paradise in dream and it gave him a flower as proof he reached this place indeed, and if at his awaking this flower were in his hand ... well, than?" The Adam and Eve's paradox intends to show how they possessed the Paradise and desired the Cognition but they were turned out as plain people on the Earth, where they reached to own the Cognition crying for Paradise.

The paradox in Antic India

If we look the other way towards the Orient and Extreme Orient world we discover that the Indian, Chinese and Japanese philosophers and logicians didn't beat the paths of paradox in the form we met at the Eleates of antic Greece, the scholastics of the Middle Ages or at scholars of modern and contemporary epoch. The Orient is concerned especially of contraries and contradictions, negation and its non-existence.

The Buddhism - entered Japan in the 6th century from India through the Chinese relay and has been stated by Buddha in his famous preach from Benares in front of the five patriarchs - consists from the four "noble truths" (satya). The first is the universal existence of *suffering* - with a more profound and general meaning than the common suffering troubles - an essential suffering *(duhkha)* that begins with the birth, the death's début, with the fragility, the inconsistency and caducity of life.The second is *the cause of suffering*, generated by ignorance *(avidyā)*, substantiated by the wishes, squashed by the incapacity of their fulfillment, which leads to a perpetuel suffering during a life period and through *samsāra*, the cycle of reincarnations, surpassing from a life to another one. The third is *the suffering abolition* accomplished by cognition *(vidyā)*, by individual perfection in which the man is released from the existent suffering captivity, takes a step on the way of noble learning to destroy suffering, when he shakes off the great fear *(mahabhaya)*, by samsāra, reaches a superior state of perfection, *boddhi*. The man improves himself continuosly by cognition - "Look for your shelter in cognition" it is written in Bhagavad-gita, II, 49 - in moral asceticism and the knowledge of Veda texts, - "There exists an eternal fig, with the root upwards and the branches downwards, its leaves being the Veda hymns; he who knows it that knows Veda" is written in Bhagavad-gita B,XV,1. The man still has to improve himself also by his own deeds, stately fulfillment of his earthly duty, and so releasing himself from passion, from the cycle of reincarnations, feeling free of life *(sivanmukta)*, fulfilling the paradox of lotus that is staying in water without being wet. In this manner he reaches the position of *arhat*, that of saint, when he realizes the enlightenment, escaping of suffering, and arrives in Nirvāna, "place" of genuine existence, the absolute reality, deprived of compulsion, conceived by Nagarjuna - one of the brightest mind India had ever (42) - in negative term, of vacuity *(sûnyata)*, not-existing neither existence nor nonexistence as a reality in its own, but only void - «all is abbys» - an abbys of the middle way". As one can see the Buddhism guides the demonstration of his own doctrine of the four "noble ways" in the claws of the paradox of wish, which consists in the desire to suppress a wish. There are logicians who uphold that the desire to eliminate the wish doesn't imply a paradox (Wayne Alt) because one can suppress - not just from the beginning - all the wishes including the elimination of all wishes. There are also the point of view about the existence of paradox but this doesn't set at naught the Buddhist programme of giving up to wishes in a relevant sense (John Visvader) (43).

Starting from the paradox of Buddha regarding the fear of samsāra - "We live in fear and therefore we don't live" - the Romanian philosopher Emil Cioran develops in *Ispita de a trăi / The Tentation to Live* (44) an alternative of paradox, thought in European sense. He shows that on his way to the end of his life, when begins "to give light the Death's Sun", the man lives an erosion process resulting an empty space of destruction idea which runs through him, a vague idea, a void which "would think about itself", occuring a fear if the "void is constant" or a nostalgia if the void will transform him in plenitude, the death appearing into the being either like deficit or like surplus.

The fear attacks the space sentiment, which diminishes, in favour of fear which grows "making it perpetual with us like a tentation and laying it in the middle of our lonelisness". We become vicious, we belong not to the death but to the deadly fear (...) making of it a purpose, a substitute of space, which end is the loss of our identity. And in *Essays* the same author makes a mention which we could name it the death's paradox: "More a person is

older, more he speaks about his disappearance as about a distant event, as much as possible improbable. The habit to live is so deep rooted in him that he became inapt for death" (45).

The main aim of the Hindu thought regarding the world is "to prepare the way for human salvation through cognition" (46). They meet here the cognition (*vidya*) - the contemplation of the principle (the existent in this essence) with the ignorance (*avidya*) - the cognition of the transient individuals, absolutly opposit elements. The cognition (*pramāna*), the object of cognition(*prameya*) and that one who knows there are the three stimuli to action. The early Buddhism has as purpose the reach of Nirvana by the man, a complex process which doesn't fall into the goal of this work. Only in the 5th century, after ten years of existence, the Buddhism will deal with logic and with the theory of cognition.

The Indian logic Nyaya - norms for speech - brings to evidence in its unity with the other philosophical doctrines two efforts of opposite sense: one which chains the spirit, because it puts it in the service of life, and other which releases it by separating it from the life (47). The system Nyaya - Vaiseshika is based on a pluralism of the realities, grouped mainly in two big classes: the existence - *bhava* - containing the positive realities, and the non - existence - *abhava* - with the series of negative deeds. Among these, The Negation is nearer to the subject of this study, and brings to evidence the perception of the non-existence, for instant, "here isn't a pot". The understanding of non-existence implys the comprehension of its place, from which the idea that the Negation or non- existence can generate a specific cognition as well as the possible knowledge of positive existence.

This can lead to the knowledge of the fact that the Negation - in the Indian logics acception - isn't "pure negativity" or "simple empty absence", but a knowledge of "it is not" (na asti).

The Buddhist logics denies the existence of negation. What is perceived as negation - "this is not here, now" - is strictly connected with a clearly determined time and space. It isn't a relation between the negation and the contested object, *pratiyogi* - for instant the non-existence of the object in pot's negation - because when the *pratiyogi* exist, doesn't exist any negation , and when the negation is present doesn't exist the contested object, *pratiyogi*. The perception of the negation at Buddhists - concludes the Romanian logician Anton Dumitru - doesn't prove in this way the existence of negation but shows only that exists a certain positive perception which is interpreted in this way. The absence of a pot isn't similar of a pot.

It appears very appropriate to this concept the paradox of nothingness of Constantin Barbu. The science is that which rejects and takes aside The Nothingness considered to be the insignificance. It doesn't want to know something in connection with Nothingness. Taken aside and ignored doesn't mean somehow that just we take it in the part? But about what part may be question when we take part in at nothing? What is Nothingness? This is a question without response because Nothingness is "something" of existence nature but absolutely different. Thus the question upsets the object of the question in its opposite. At limit we meet the Molière saying: "I take my asset where I find it", what is not different to its opposite also another French assertion: "Avec rien chaqun peut tout faire" (With nothing everybody can do everything). In consense with this saying - we could think - Goethe built his own house "over the nothingness" and in this case "the whole World" belongs to him.

The Indian Buddhist logics, due to the Santrantika School - founded on the *sutras* authority - had relied on the *pramāna* concept, the way of true, exact knowledge from the two origins of human knowledge: *the sensibility*, "forestructred by the mental form of universe" (Sergiu Al. George), which by means of feelings sets itself in contact with the particular, the perception (*svarupa*) being the primary origin of cognition, and *the intellect*, considered as a secondary and false elaboration of perceptions, the objects of the reality being thought, the reason not being a valid mean of cognition. Through *aprama* - the

unauthentic cognition *naiyayika* - the Indian logicians study also the false cognition presented in three manners: the logic doubt, confusion and absurdity, the nearest to the european contradiction and paradox with the means of proposition like "look fire, without smoke", "Nor the sacred texts can understand what is contradiction" is written in Brahma - sûtrabhā-sya, II, 1, 27. If at Spinoza any determination is a negation - "*omnis determinatio est negatio*" - the negation interpreted by Pānini - the famous sanskritolog of remote 5th century a. Chr - is a determination - "*omnis negatio est determinatio*" - and as these two reasons are not identical and the negation appears in a different interpretation to those of occidental one. The negative particles of a - private or non-A type work - in conformity with a comparaison made by Patānjali - like " the light projected over the objects (*dravya*) in darkness; accordingly the negation suppresses the sense (intenseness) but illuminates the objects (extensiveness). The particle NON, from the compound non- brāhman, instead of enriching the intenseness of the new word, eliminates it, by creating a term deprived of intenseness with a value pure extensive. It is the reverse of the situation for the compound "the blue lotus" where the determinate (the adjective blue), which adds a note absent in the determinant (lotus), leads to a noun with a greater intenseness and implicitly with a smaller extensiveness. This position about the negation drives indirectly to a specific characteristic in the plan of logics. In the plan of reality the negation corresponds to an "absence" (*abhāva*), which settles a *locus*, the equivalent of the subject in the theory of predication. But as the subject of a logic expression couldn't be conceived in its own without a reference to the reality, to a prime substance - the Aristotelian concepts and secondary substances haven't reference plan in the Indian logics - the negation could never be non-existential. "Doesn't exist immortal man" corresponds in the Indian logics to "«the fact to be man» is absent into a locus where exists the absence of the mortality".

The paradox in the Antic China

From the Chinese mythology it had taken off two philosophical systems: the Hung-fan system, the Big Rule, based on the five elements - water, fire, wood, metal and earth - and the "polar" system made up from Taigi, the Big Pole, and the "law" Yang-Yin, the South Pole. *The Book of Documents*, *Shu Jing*, and *The Book of Transformations*, *Yi Jing* demonstrate that the whole becoming is achieved on the base of Yang-Yin dualism.

According to the old Chinese thought the universe is an unit composed from matter and energy mastered by two antagonistic and complementary forces, Yang and Yin, who keep the universe's equilibrium, they being present in all the phenomena, things and beings in different combinations. Yang, cosmic principle, masculine, dynamic, active, bright, represents affirmation, movement and time flow; Yin terrestrial principle, feminine, static, passive, gloomy, represents the negation and the space, who opposes resistance which modifies the time, being set up as a contrary of first order. From the five elements (*sing*), the water and the wood i.e. 1 and 3 are submitted to Yang, the fire and the metal, respectively 2 and 4 to Yin. So the even and the uneven appear as contraries of secondary level with the mention that the uneven, includes the even, and can produce it, and, into it and through it move the even and the uneven by virtue of the determinant function of Yang (48). The two principles are represented by a well-known drawing, a circle halved by a sinuous line in two zones, one white with o black point, and the other black with a white point. These points are the cores of the two principles localized everyone in the center of the other space, both zones moving round, one to other driving out, similar to the rotation of moon and sun from the Romanian tales with cosmogonic and nuptial significance (49).

From these two opposite principles and till the Dao's world unity, The Way from the work *Dao de Jing* (The Book of the Road and of Virtue) of Lao-tse (6/5 cent a. Chr), towards the philosophy is only a step, and the step and the connection is made just by Lao-tse in *Dao de Jing*, XLII:

"Dao creates One,
from One is created Two,
from Two, Three.
Three gives birth to ten thousand of beings
The ten thousand beings lay upon Yin
embrassing in the same time Yang
at the harmonic Void's breast the median
breathings is fruitful"

In fact who is Dao? "Dao is an alien concept to our philosophy" asserts Etiemble in his foreword at the French version of Dao de Jing's Book. "After Dao «something exists» (yen) a sort of «nothing exists» (wu), an imanent eficiency (dao), in absence of which should put forward the gesture of a creator, the intervention of a demiurge "adds Etiemble. Dao is the whole reality is his steady becoming, endless, the entire flux towards the entropy. Dao means "road", "way" but has also the meaning of "element", "reason", "logos". Dao is a supreme principle, an infinite creative power of world, a supreme being, an idea near to that of God, to the idea of *natura naturans* of medieval philosophy, a pure existence, the soul of world that gives it life and order, similar absolute as that of Hegel (Julius Grill), a king of imperceptible matter (Wieger) a metaphysical substance placed outside the time and space (Ion Banu), as it seems it had a similar activity as the prime motor of Aristotle which moves all, and being with necessity imobil (Anton Dumitriu), a principle of principles. Dao de Jing is written in five thousand ideograms. Jacques Granet asserts that the work contains "sibylline sentences destined no doubt to be useful to themes of meditation and whose obscuranty has attracted numerous exegetes". Many of these sentences are examples of contradictory concepts set on the plates of logic and reason balance of all readers along two millenia of history. Let know some of them:

II. "The Existence and the Nothingness occur again. The easiness and the hardness make even. Large and small interweave. Tall and short touch. Voice and sound harmonize. Precedent and subsequent succed each other".

Lao-tse aspires to Being, but has present in conscience and doesn't forget the Void. "Existence and Void - two words of a sole ignorance that from its impenetrable obscurity turn blind us". (Etiemble)

III. Dao is like a vessel which never could be filled in. It is like a abyss, the origin of all things of the world..."

IX. "A sword that is sharpened endless can't keep long time its edge. A room filled in with gold and jade nobody can't watch.

XI. "Thirty spokes has the wheel's stump, but void between them makes the move of cart. You knead the clay to form the pot's wall, but the inner void is useful. A house is provided wih doors and windows, but the inner space allows to live. The being creates the possibilities but the non-being uses them".

XIV. "Looking at it, you don't see it, and you name it invisible. Listening at it, you don't hear it, and you name it unheard.

Touching it, you don't feel it, and you name impalpable.

These three states whose essence is obscure are finally confussing in an unit.

XXV. "Exists something undetermined before the birth of universe, something empty and without voice, independent and unalterable, that moves overall without any wear and tear. This something is the mother of universe. We don't know its name. I name it Dao and I call it Magnificence. The Magnificence implies extension, the extension implies removal, and removal implies returning. Dao is great, the Heaven is great, the Earth is great, the Man is great. Therefore the man is one of the four greats of the world. The Man imitates the Earth. The Earth imitates the Heaven. The Heaven imitates Dao. Dao has not other model than itself".

XXVI. "The difficulty is the root of the easiness. The silence is the master of agitation."

XXIX. "He who tries modelling the world will fail. The world, spiritual vessel, can't be shaped. He who keeps it, destroys it. He who conserves it will lose it".

XXXIII. "He who knows another is clever, he who knows himself is enlightened, he who defeats another is strong, he who conquers himself has a strong heart. He who is content is rich. He who strives to act has will. He who stays in his place long lives. He who died without vanishing reaches the imortality".

XXXV. "He who scores the Great Image can traverse the world".

XXXVI. "He who wants to overthrow somebody should first raise him. He who wants to weaken somebody should first strenghten him. He who wants to eliminate somebody should first glorify him. He who wants to undermine somebody should first concede him. This is the subtle vision of the world. The supple triumphs over the hard and the weak defeats the strong".

XXXIX. "Nobleness has as root the humility. The height has as base the low part of the things. The supreme honour is without honour".

XLIV. "Fame or health, what is the most valuable? Health or happiness what is the most important? To win the one by losing the other: what is the best?"

LIII. "The Great Way is unic but the crowd prefers the crossing roads".

LVI. "He who knows doesn't speak, who speaks doesn't know".

LXIII. "Practise non-action, perform non-achievement, taste lack of savour, consider the small as great and the few as much. Assail a difficult thing in its easy parts, come to a good end a great work through small actions. In the end the most difficult thing in this world is reduced to accessible elements".

LXVII. "I have three tresures of my own very precious for me: the first is love, the second is saving, the third the humility. Whoever is courageous without love, generous without saving and boss without humility he one goes towards the death. He who struggles for love triumphs. he who defends himself through love and is firm the heaven will defend and protect him with love".

LXVIII. "A true commander isn't warlike. A true fighter isn't choleric. A true conqueror doesn't pledge himself in war. A true leader place himself under the people".

LXIX. "A strategist of the antiquity said: I daren't take the initiative; I prefer better to wait. I daren't advance with a single step. This means to progress without advance, to push without the use of arms, to riposte without arrows, to oppose without the use of bow. It isn't a more dangerous evil than to underestimate the enemy. This means to lose the treasure. During the confrontation of two equal armies in strenght, he who supports the war sufferings will be victorious".

LXXVII. "The Way of Heaven doesn't act in the manner of someone who stretches a bow? It lowers what is up and raises what is down; it pull out what is extra and adds where is lack. The Way of Heaven sets aside the surplus and compesates the shortage. The Way of Man is completely different. The man takes from poor to add to rich. Who can give it the world his surplus whether not he who has Dao?"

LXXVIII. "Nothing is more supple and lighter that water, but to set aside the strong and hard one, nothing overtakes and nothing could replace it. The weakness has the reason of power, the suppleness has the reason of hardness. Everybody knows but nobody can set it in practice... *The words for Truth are paradoxical*".

Lao-tse teaches us that power is weakness and vice versa, that water defeats the stone, that it is dangerous to underestimate the enemy, that a true commander isn't a warlike, that it is compulsory not to be with the army in the place where the enemy is waiting, that it is better do not perform a frontal attack and to fight without love for war. Because the alternation of contraries which rules the cosmos and the society is like yang and yin and imposes to our reason the distinction of the two contraries that makes balance of sense; for instant the halt

of the fight, armistice or peace, which would opose to war and sets the good against the evil. The becoming of the reality begins with Dao who acts in a state of non-action (wu-wei) an activity which works in a state of repose.

As we can see still from the antiquity "the Chinese thought appears enigmatic and even paradoxal" (Anton Dumitriu), without considering it deprived of depth and sense. The Chinese logic is set up also by the structure of Chinese language.

Marcel Granet shows that Chinese language is saturated with affective elements, and orients firstly in order to obtain an immediate and practical effect in view to determine an action. The ideomatic expressions are formulae capable to provoque in the speaker's conscience a affective state destined to make him to receive a certain truth.

The antic Chinese thought has distinguished characteristics. The antic Chinese doesn't think with words. The words doesn't represent an abstraction but a complex of visualised images, they are not signs but vocalic emblems. The writing is based on the emblematic aspects, too. An ideogram consists in two parts: the radical with the sense, and the sign with the fonetic note. The reasoning mind calles to the object, the think stays on the concrete reality, it owns the object. In the Chinese language the objects have a natural emblem with corresponding word for the speech in the shape of a vocal emblem, and a sign for writing, a graphic emblem.

An analysis of Chinese phrase indicates the absence of mood, tense, gender, person, number, of conjuctive preposition, it appears like a free succesion of ideograms - with a certain order and logic strange for an Occidental - and which leads to a bright vision of idea, a symbolic image that reveals the truth. In the Chinese thinking is present the negative reasoning, but a sentence having a such value can express in the same time a negative and positive reasoning. The lack of difference between the two types of reasoning leads to the paradox of idea and object: "Ia Kong son en Long", that means "Object non-idea, but idea non-idea". This sentence sets to evidence two contradictory reasonings. The first: every object is idea, but idea is non-idea. The second: every object is idea, but idea is not idea. The negative sentence *idea is not idea* means that idea in its own, doesn't exist in the world. If idea in its own doesn't exist, it is impossible that any object in the world would imply a participation to idea. From this the first Chinese phrase taken as negative reasoning annihilates the existence of idea and the participation of the universe to this idea (Anton Dumitriu). The paradox consists in a simultaneous existence of two reasonings which transpire from the Chinese proposition: the idea doesn't exist nor in its own, nor in the world, and, the idea exists in its own and in the world. There are opposite interpretations about the notion of idea, of paradoxal type. But the antic Chinese thought like the nowadays philosophical works - and why not even Dao de Jing - contains countless phrases of paradoxal type.

The Chinese logic relies on the concept of order and unity. A world built on five main elements, on five *sing*, and the same number of feelings, sentiments, tastes, colours, musical notes, all these with different appearances as the results of their combination and the action of the two creative principles, Yang and Yin, can base its thought only on a concrete logic "a grill which put in order the thought" (50). But the Chinese philosophy and implicitly the logic too relied on both the order and dynamics as well as on their negation, the last represented by the sophists like Huei-tse and Gungsun Lung (4th cent. a. Chr.) who let in their numerous paradoxes, some of them against the reality e.g. **"The sky is as lower as the earth"** or **"The wheels of a cart don't touch the ground"**. Others are against the real time e.g. **"The sun sets down when it is at the zenith; the creatures die when they bear"** Others eliminate the class differences: **"A nail has a tail"**, **"A dog may be like a sheep"**. And finally some paradoxes regarding even the logic notions: **"A great resemblace doesn't differ from a small one"**, **"The definition never rich the scope: no matter how far we should go with them, the end is unattainable"**. The Chinese philosophers and logicians

were engaged in language, word, meaning knowledge, action. For instant as regards the concordance between name and object, the philosopher Kuang-tse (298-238 a. Chr.), in the book bearing his name, in the chapter "Names'rectification" outlines the following: "None of names doesn't belong actually to some object. The name is given by convention, and this once settled the matter is usual. For this, one can say that name is something specific (for the object)". From this results a special concept regarding the definitions, which are concise and can't be exhaustive, and so an insufficient light over the concepts: "The drawn fish has a single eye". And a sorites from Yin Wan-tse (4th cen. a. Chr.) asserts in extension: "If the designations are not correct than the words don't fit, and if these don't fit, then the things are not explained, if the things can't be explained then the customs and the music don't progress, and if these stagnate nor the punishments aren't given correctly. If these aren't correctly used then the people can't know what to go".

The Chinese logic sets the accent on the purpose stated by the proposition and not on the words they it compose: "A net serves to catch the fish - is said in the book «Thuang-tse» - when the fish is caught, who thinks anymore at the net? A trap is good to catch haires; when the haires are caught who thinks anymore at the trap? The words serve to withhold an idea, when the idea was felt, it is necessary to stop at the words? Oh, if we could find a man who knows to pass over the words, for I could have him near me to speak him". A paradox not too far from that stated in the previous pages - of the thought - which proposed to find a thought which can't be thought.

The knowledge at which one can reach through study is at its turn pragmatic and has in view an aim: "So the sage, when sets designations, he makes this always so that the words would be in concordance, and when he uses the speech makes it in the way they would perform action". From here also the logic of a sorites of Lao-tse: "The different beings of the worlds should go back towards their roots; to go back to the roots means to place in silent; to place in silent gives order's rediscovery; order rediscovery gives constancy's knowledge; a constancy knowledge means enlightenment". Respectively the entry in resonance with the world, the achievement of the harmony with the Universe. What will be met by Zen.

The paradox in Japan

The antic Japan isn't present in any philosophy or logic book. Hegel in his *History of Philosophy* as also in *Lecture on Philosophy of History* after the chapters about the Indian and Chinese philosophy, has none a singie line refering to Japan. It is however natural for a country which enters the History in the 5th century of our epoch, which adopts writing with a century ealier, which condemns itself to isolation and xenophoby a period of six centuries.

In these conditions one cannot speak about a progress in science. After the continental model, in Japan of the middle of the first millenium is founded the College of Cofucius Studies and the Commission of Yin-Yang Art. The daily life at the Court from Yamato - the imperial court of the principality which formed the first formation of the future Japan - was under the sign of Yin-Yang art and of astrology, the ceremonies, the negotiations, the contact among the state representatives and diplomatic missions being established as function of the foreseeings of these organizations. The astrology dominated the scientific life of Japan till the 19th century through the hereditary reprezentatives of Yin Yang art. Unlike Europe, where were pursued the nature laws (Kepler, Herschell), Japan - like China - pursued the exceptions, apparition of comets, of novae etc. resulting that the astronomical parameters change at large intervals of time. In the medicine domain existed the faith that the place of thought is not in brain; the nervous system did not exist in the japanaise concept. The term of nerv appears only in 1874. The mathematics (wasan) were considered an art (agei) and was cultivated by amateur groups like a plain amusement. One of the "problems" of math in the second half millenium two consisted in trying to inscribe an as larger possible number of little cercles, tangent each other, intc a triangle. However, a "philosophical" concept about

the world existed in Japan as the result of the amalgamation of some religious faiths and doctrines as Shintoism, Confucianism, Daoism, Buddhism an Bushido - the samurai code. More recent and nearer to the subject of this essay is situated the Zen doctrine.

It is saying that the ideas staying at the base of Zen doctrine are to be found in the famous sermons of Buddha-Sakyamuni - the sage of Sakya family - educated by his favourit teacher Kashiapa who becomes the patriarch of the meditative sect Dhyana. In sanskrit the word dhyana means "concentration" one of the phases of yoga techniques, that of the concentration of the subject's mind. Kashiapa shared the instruction of Apanda and this at his turn gave it to the following patriarchs till at Bodhi Dharma. The 28th patriarch of indian sect. Bodhi Dharma came in China in the year 520 and established in Nankin where he preached his concept Dhyana having as a ground the idea that enlightenment could be reached not by using some intermediary texts - like the Buddhist sutras - but by meditation - an alien term of Buddhism - in which the man comes into contact with the absolute matter of nature; Bodhi Dharma himself upholds that he reached enlightenment, not by directing the thought towards some deity, but after an unic experiment of meditation, staying nine years with the face against a white wall. Bodhi Dharma has elaborated the work *The Wall Contemplation in Mahayama* becoming the first Chinese patriarch of Dhyana sect. The doctrine has strenghten towards the end of Tang period, the sect brought the name of Chan, and took away from the Buddhist precepts, rejecting Buddha's sacrality and considering that he is a common being. The sect became around the 12th century the dominant form of Chinese Buddhism.

The Chan doctrine penetrated Japan in Kamakura period with the help of Japanese monk Myōan Eisai (1141-1215) who as early as 14 years becomes an adept of Tendai sect and studied the Buddhist instruction at a monastery on the Mount Hiei. At the age of 27 he leaves for China for studies. After a second travel he comes back in the year 1191 when he bore the title of Teacher of the new doctrine. He "thought anew" the precepts of Chan into a Japanese vision which will bear the name of Zen and spread the doctrine in Kyoto where, with all the opposition of Tendai monks will raise the Zen temple, Kennin-ji, under the patronage of shogun Minamoto Yorûe, the son of Yorimoto. Eisai lived 74 years and let three letters on the doctrine Zen. The doctrine Zen will be continued by other famous monks.

In the knowledge of the reality the Occidental thought is based on the intellectual instruments, on reason, on linear classic logic (yes-no, true- false, good-bad). Zen starts from the idea that the access to the reality is achieved by man on the ways which don't allow him to obtain an objective image of it. The elements delivered by the means used by man are subjective and abstract and they offer him merely an illusion - maya by Indians. Therefore Zen tries to penetrate the existential reality and eludes the intellectual means. The reality comes to us not by means of research, by the use of logic, of symbols, of words and logical construction. "Zen demands to make free the spirit from the intellectual constructions which are made from the most part of our philosophies, metaphysics, morals, the notions relative to good and bad." (R.Linssen). Zen crosses over the intellect and makes short circuit to it. "Zen refuses to give to intellect the rôle of supreme arbitrator (...) and even the quality of investigation mediator (J.Herbert), because the human intelligence is imperfect. The Zen process consists in a jump from the knowledge through thought to the direct knowledge. A jump for which those who are unprepared must build theirself a bridge in order to carry them to the aim. The aim is satori, the enlightenment, which doesn't know the transcendent, the enlightenment having the nature of Buddha in *itself own*. "Don't think at good, don't think at bad, look what it is, at present moment, your genuine physionomy: what you had just before to be born" (Hui Neng, Chan patriarch). Or:

"Don't thing, don't imagine, don't analyse,
No accumulation, don't select,
No suppositions over those around you".
(Tilopa - Buddhist master from Tibet)

The Zen doctrine considers the notions of good, bad, true, false, time, move, repose, subject, object, as being relative and conventional; the unic reality is the conscience of the individual where both the subject and the object are disolved. This reality may be knowledged through direct meditation, where the present moment is lived with full attention and with clear conscience. Zen would allow direct communication with the intimate nature of things; the auxiliary elements from the exterior form obstacoles on the way to the truth. The way of meditation carried out through a long exercise, without sensation, the suppression and though stifling, but making free place for spontane enlightenments, leads the Zen advocate to the state of Buddha, of enlightenment, which must to be found in himself own.

The enlightenment can be achieved every moment. This state is produced in the moment the man is free from intellectual speculations he learned in schools and libraries, from all rememberings from the past, in the moment this spirit isn't trubled by ideas. Zen is essential non-mental. The man with correct seeing and correct attention and succeeding to avoid the presence of some mental act between him and the facts lives the "present in Present". An essential practical life which includes the human being in his physical and psichological totality with access to his profound nature and performing the conscience of abyss, another Zenist precept.

The abyss, compared with the void, as "the totality of distances among the bodies" is a space like image of non-being, recently considered even independent from the "being making", a decisive fact for Gassendi who asserts that if God carried the bodies in other place, the space would continue to exist (51).

In an European concept the abyss is non-existence, non-being, i.e. the determinates opposite to existence. In the common concept "the life is a pathetic dialogue with the abyss" a long "itinerary with the last halt projected in the abyss. All intermediary phases are built, more or less, on the background of logic: but the last tears in pieces the traditional canons and sets up definetively the dictatorship of absurd" (52). The abyss - "this toil and moil Nowhere", as called by Rilke - "for Buddhism (correctly speaking for the Orient in general) doesn't involve the somehow sinister meaning we give its. It is assimilated with a finished experience of light or, if you want, with a state of eternal bright absence, of radiant void, it is the being who is beyond of all his properties or sooner a non-being in the highest grade positive and who irradiates a hapiness deprived of substance, of substratum, without any base in one of the Universe's worlds" (53). The conscience of Zenist abyss is achieved by living the present, unseparated by "the conscience that the past doesn't exist and that the future doesn't exist yet. The operation the Zen doctrine links (...) the present to the notion of abyss begins with the refusal to represent itself the past, the present and the future in a form of continuity, considering on the contrary that, the present is eternal and contains in itself the past and the future" (54). The most important models and tachniques Zen appeals to, in order to achieve the enlightenment, are *zazen*, *toki no ge*, *mondo* and *koan*. Except the technique zazen - of meditation - the rest of techniques has a direct connection with the subject of this essay.

Toki no ge, or more simple *ge* - *gāthā* in sanskrit - means "mutual agreement state" between the master and disciple accomplished when the spirits of the two are immersed one in other. An example of *ge* offers just the history of Zen Buddhism. It is saying that Hui Neng, an illiterate young man, in the course of gathering firewood in the forest, heard the following words uttered by a bonze: "Without relying on something you must find your own mind". Immediatly his mind become light, clear and enlightened by the understanding of the fact that the truth is to be found in the very existence of man. Later on the young man found that this text is a part of Diamond Sutra, one of the books of Buddhist instruction. The bonze, at this turn, observing the curiosity and inclination of the young man towards meditation, recommended him to go to the temple of the fifth Zen patriarch, Hung-jen (601-675). The above mentioned phrase represents an example of *ge*.

Ge can be also some verse of Buddhist representatives or of Zen patriarch, written during the moments of supreme ecstasy or later when their mental eye was open and have had the revelation of enlightenment. There are verse with very various character regarding the "literary" formula so that it is almost impossible to promote a analysis on them. The single their merit is the fact that they offer a working material those who are studying the psichology of the Buddhist mysticism" (55):

"This body is born from the womb of a formless one".
"Like through a magic all the forms and images appeared".
"Misfortune, happiness, both are empty, inconsistent".

(The First Buddha, Vipashyin)

"We penetrate the purest truth of spirit
And don't find things nor their absence;
Enlightened or non-enlightened - they are the same
Doesn't exist spirit nor matter".

(The 6th Zen patriarch, Dhritaka).

"What great illusion! Oh, what a tremondous illusion!
Raise the curtain and come look the world!
«In what religion is your faith ?» ask yourself!
I'll turn my hossu and I'll strike your mouth!"

Tchang-king

"Something fell! Isn't else!
On left and on right, nothing earthly:
Rivers and mounts and the big world -
In all is revealing Dharma-rāja's body".

Ien-chen (In Japanese Yenju 904-975)

"A big millstone is flying in the air;
A golden colour lion changed into a cur;
Whether you want to hide in the Northern Star
Shave you and cross your hands behind the Southern Star".

Jang-k'i (In Japanese Iku).

These are examples of very diverse poems of which can't explain intelligibly the satori phenomenon, the enlightenment. There exists in these verse the sentiment of a new revelation, but till to find what is the consistence of this revelation it's an uncovered distance of specific knowledge. All the Zen masters certify that in Zen exists an element, satori, wherethrough they reach a world of new values, where the old manner of thought is abandoned and the world gets a new sense.

Mondo, or the dialogue in shape of a rapid sequence of questions and answers between the master and the pupil, has as purpose to hurry up the thought process in the manner to be surpassed suddenly resulting a mental catastrophe, a flash, the enlightenment. Here is a typical mondo dialogue: Master: Were you here ever? First pupil: Yes, roshi (master) I was. Master: Take a cup of tea. Comes the second disciple. Master: Were you here ever? Second pupil: Never I was. Master: Take a cup of tea. Another monk asks: Roshi, why do you invite everybody to take a cup of tea no matter of the answer? Listen, said him the master, take a cup of tea". The reason of these paradoxal responses is precisely in their striking, shocking, unreasonable character, the means of direct demonstration of stupidity and of vanity of a step based on intellect" (56). Many of people who heard about something carrying the name of Zen have abandoned the schools, the libraries and the written texts, and have come bare-handed to receive instruction in this doctrine. It is told about a Zen master who walked the corridor of a monaster with a burning candle. A pupil crossing the way asked him. "Master, where did you take the flame from?" Loung T'an blew out quickly the flame and answered the young appentice: "Oh, Te Chan, tell me where is gone this light and then

I'll tell you where I found it!"

The *koans* are paradoxal thought propositions - a word, a phrase, a poem, sometimes a compresed form of *mondo* - which demands the discovery of some solution which would allow the access to a spiritual interior vision. After D.T. Suzuki, one of the most famous Zen theorician, koan is a topic, a proposition or a question which is given to be solved to a Zen student and whose solution should lead him to a spiritual interior vision (57). Zen leads to something alive, active, and this thing can be called"to see in its own nature". In this spirit Zen was defined - in a paradoxal manner - as "the art to see the Southern Star in the meridional sky".

There are known 1700 koans. Some examples of them are given as follows:

"If all the things are reduced to one, then one at what is reduced?"
"We know how applaud two palmes, but how applauds one single?"
"Life is as a sworm: injures, but can't be injured itself:
like an eye that sees, but can't see itself".
"An easy wind and the flowers are scattered;
the song of a bird; the mistery of a mounth raises".
"Into the Great Chaos doesn't exist neither forward nor backward,
The bird's flight wipes distance between East and West".
"The old pine says the divine wisedom
The hiden bird knows the eternal truth".
"Doesn't exist a place where you can search the mind;
It is as like you would search the trace of the bird on the sky".
"The words are not enough to know a man;
You must know the man to understand him".

Or this dialogue which as method belongs to *mondo* and due to its absurd character comes near to *koan*. Question: "Which is the secret of Zen doctrine?" Answer: "What kind of appearance had you before the birth?"

The Zen masters go on till the point to uphold that the Universe itself is a great **Koan**, alive and threatening, which defies our effort to solve it, wherefrom comes the importance of Zen study in order to know this universe respectively the essence of nature. The *koan* experience being recognized as a necessary phase to accomplish the enlightenment (satori). For satori occurs as much abruptly as abrupt is the *koan*'s core itself, as much paradoxal as the looks of *koan* and suddenly as a *koan* consumes itself too.

The paradox and the literature

A chapter with a vast field of problems we can grant only a few considerations.

The paradox is present in dictionaries among the figures which represents one of the foundation stones of the creative act, with the same meaning like that granted in the general definition given into Larousse and mentioned in the beginning of this work. Precisely in the Romanian *Mica enciclopedie a figurilor de stil*, "Little Encyclopedia of Literary Figures" (58), the paradox is defined as "a figure where by is stated as true an idea, apparently oposite to the truth or to the common opinion". And the first example is an excerpt from the introductory part of Satire I of Mihai Eminescu, the greatest Romanian poet:

"La'nceput, pe când fiinţă nu era, nici nefiinţă,
Pe când totul era lipsă de viaţă şi voinţă,
Când nu s'ascundea nimica, deşi tot era ascuns...
Când pătruns de sine însuşi odihnea cel nepătruns.
Fu prăpastie? genune? Fu noian întins de apă?
N'a fost lume pricepută şi nici minte s'o priceapă,
Căci era un întuneric ca o mare fără o rază,
Dar nici de văzut nu fuse şi nici ochi care s'o vază.

Umbra celor nefăcute nu'ncepuse-a se desface,
Şi în sine împăcată stăpînea eterna pace!..."

Into the time are things begun, when being and not being still
Did not exist to plague man's mind, and there was neither life nor will,
When there was nothing that was hid, yet all things darkly hidden were,
When self contained was uncontained and all was shrunken everywhere.
Was there a heavenly abyss? Or yet unfathomable sea?
There was no mind to contemplate an uncreated mystery
Then was the darkness all so black so seas that roll deep in the earth,
As black as blinded mortal eye, and no man yet had come to birth,
The shadow of the still unimade did not its silver threads unfold,
And over an unending peace unbroken, empty silence rolled!...

(C.M. Popescu: *MIHAI EMINESCU - POEMS*, Ed. "Cartea Românească" 1989)

In gramatical point of view the paradox is the clothes "of a reasoning apparently absurd, the stated phase containing an initial proposition in an apparent contradiction with the following one: «Today so, tomorrow so, *till I got a accustomed* with the death and I begun to live» (the Romanian writer B.Şt. Delavrancea). The paradox requires ability for a writer who dares to build it, otherwise the pen falls in confusion and hermetism. The Romanian writers have used it with priority, by setting it in the service of satyre and of humour. For instant I.L. Caragiale: "... would be treason (with some emotion) if required by the interests of party, *but would be known by us*... Therefore I repeated always like our forefathers, like Mihai Bravu and Ştefan cel Mare: "*I like the treason* (with interest), but *I hate the traitors*" (from the play "*A lost letter*"). Ion Creangă: "Poor as new, as last year and *as I am in this world, I was never*". And Marin Preda: "Voicu is a *cleaver man*, but impairs him the *stupidity*, said an other guy with carelessness. He had two sturdy horses, devil knows why sold them..."

The paradox is related to oximoron, another figure which consists in an ingenious association, in the same syntagme, of two words which expresses contradictory notions: white mist, black stars, sinful saint, old young, clear uncertain. And asks himself the essayist Ştefan Foarţă: "Who is still indignant at oximorons like «cold fire»? For the paradoxes are losing the teeth in time, they dull too like the silver coins" (59).

Pierre Fontainier upholds in (60) that the paradox could be fit in the class of figures only by absurd and can be "detected and determined cleary only by thinking a little at its hidden understanding". And he gives examples with quotatin from Cinna by Corneille, the famous verse set into mouth of the ambitious Auqustus: "Et monté sur le faîte, il aspire à descendre" (And climbing the ridge, he tends to descend). The antithesis in verse is built on the apparent contradiction of the terms *to tend* and *to descend*, but "the energy, the force of these terms" come from the fact that the ambitious who had an unic creed, that to come to the fore, by defying and treading all under foot, when he *climbed* the ridge and "sees nothing over him" he is mastered by a contrary wish, that to descend from the height, from which is not attached, which took him away from his normal condition, from himself. Another example is taken from Racine, when Burrhus asks Agripina, by entrusting Neron to bring up a prince worthy of governing Rome, and the people ask themself whether shouldn't be *educated in ignorance*. Because a prince should be "educated to ignore all he actually should he to know (...) to neglect all he should to do" and therefore he would receive *ignorance lessons*.

The "literary" form characteristic for a paradox is that of "stanza" and "aphorism" a category which cultivates even the species. Here are a few (61):

Just in the moment of our birth the time begins to take back our life (Seneca).

Every going out has a going into something else (Tom Stoppard).

The bird was the idea of the egg on purpose to obtain more eggs (Samuel Butler).

My reputation rises with every failure (G.B. Shaw).

Who will watch the guards? (Juvenal).

Hasten slowly (Suetonius).

Chance can't be let at hazard (N.F. Simpson).

Only the transientness has a lasting value (Eugen Ionesco).

I have seen in the tip of my fingers the beginning of her hair (Edmond Jabès).

Another victory like this and we are lost (Pyrrhus).

In a philosophical dispute the loser is more winning with the lessons he learns. (Epicurus)

The plain can't be seen from the inside (Emerson).

If you don't wait the unexpectedness on will find never the truth (Heraclitus).

If you think you are free no escape is possible (Baba Ram Dass).

Involve me outside (Sam Goldwyn).

The few things I know is due to my ignorance (Sacha Guitry.)

The seriosity is the single shelter of one with poor intelligence (Oscar Wilde).

Trying a selfcharacterization is like trying to bite your own teeth (Alan Watts).

If you use your mind to deal with your mind, how can you avoid a huge confusion? (Seng-Tsan).

What's happening to the hole when the Swiss cheese is over (Bertold Brecht).

What must remain, naturaliy, after the end of the world? A reporter (Nicolae Iorga)

The sum of the misfortunes which still are unaccomplished to us is named happiness (Romuius Dianu).

The bank is an instituation which lends you an umbrela on clear sky and demands it back in the rain (Jerome K. Jerome)

The poor man sells his plate to buy what is to put in it.

If you switch on the light early enough you can see how the darkness is like.

The Academy ensures you the immortality along your entire life.

Everybody carries in his inside the seven opposite capital virtues and voices: vanity and humility, cupidity and moderation, impudicity and chastity, envy and impartiality, avarice and prodigality, laziness and laboriousness, anger and patience. And can draw out from himself as well a despot or a slave, a murder or a saint, Cain and Abel (M. Unamuno).

The man goes forward only when he feels he can't do what he wants (Grigore S. Moisil) (35).

The paradox is not limited only to these ... paradoxes. In the literature the paradox plays an important role in all the genres: lyric, epic, dramatic, rhetorical.

For instant, in the Japanese lyric the paradox has a fundamental aesthetic function. In this way, in conformity with the canons of the aesthetics, the micropoem haiku should contain two basical elements in order to maintain the ideatic balance: *fueki* and *ryûkô*. *Fueki* represents the constancy, the non-phenomenal endlessness, the eternity, non-temporal dimension of the art, solidly upheld by the authenticity of the reality «caught» into haiku. *Ryûkô* means the phenomenal trainsientness, the ephemerality. There are contradictory concepts, opposite, but they enter together in the poems: The part of haiku dominated by the phenomenal ephemerality balances the other part mastered by the non-phenomenal constancy:

"The old pond -
a frog jumps in,
the sound of water".

In this famous haiku of Matsuo Bashô, a classic Japanese poet of haiku, the first verse calls forth the eternity - *the old pond* - and the *frog jump* evoques the ephemerality; but the sound of water strenghtens the opposition against the eternal silence of the pond. "Due to these elements the sense of the poem as well as a part of its virtues are linked to the opposition between the adjective *old* and the name *sound*" (62).

In haiku the element *fueki* is simbolized by the eternal elements of the nature like the

sea, the moon, the mountain, the lake, and *ryûkô* by the ephemeral ones: the cloud, the mist, the wind, the rain, butterflies etc.

The cognitiv-creative subject, the poet, present in the middle of nature and witness to its endless phenomen world, steps on the world stage mastered by the *mu* state, identified with the void state, by the spiritual vacuity, able to confer to haiku the aesthetic value *mu-shin*, "without spirit".

The void had filled a central place in the thinking system of the Extreme Orient beginning with the daoist philosophers Lao-Tse and Zhuang-Zi (cent. 4b. Chr.) and following with the Buddhist, Chan, Zen as well as the neoconfucionist philosophers too.

In accordance with the daoist concept, before the Heaven and the Earth it was the Nothingness, The Void, the non-substantiality, the Supreme Void. Lao-Tse writes: "At the beginning it was the Nothingness ... The Void gave birth to the Cosmos" (63). But the Void is conceived as a substance which lies inside the things and beings. Therefore the Void tends towards the plenitude, towards Full. Void means Fullness, and the Fulness is the whole, however much would appear this a paradoxal thing for the Occidental concept. "The Void between the Heaven and the Earth shelters the life; it is the vital knot, the living centre, the place where are born the influxes and take place the changes" (64). And the same author explains: "Thirty spokes converge to the stump of the wheel; the emptiness which lies in the middle moves the cart. From a clay ball bears the pot; the inside emptiness makes the use. Do you bore the wall to make doors and windows the emptinesses make the room. What it is give the use; what it is Not the employment" (65).

The perception process of the void presumes an approach and integration of poet into the nature's spirit, not on ways of reasons, of logic, of symbols and definitions of thinking, but through a true knowledge of its character, by living the events of its own existence naturally" by interpenetrating them with those of the nature at the level of its spontaneity. It is in this operation an attempt to vibrate with the specific frequency of the nature, to enter with the personal rhythm the living cadence of nature, remaining permanently detached by it, consciously. It doesn't put the problem to imitate or to mimic the nature, but only of an approach near the nature by its ways, without the integration in it the personal system of reasoning, alien for the nature."It is somewhat of directly and fresh in the quality of the nature to be limited not at all by something human; in that consists its godlike liberty and creativity. Nature never deliberates, it works directly, from its own... its «Unreasonableness» transcends the doubts and the ambiguites of the human being. When we observe it or, more exactly, when we accept it as such, we arise beyong ourself" (66). T.D. Suzuki tells about a *satori* of the famous master Fo-Kouang who threatened with death by the soldiers of dinasty Jüan would have said quietly: "I am happy that all the things are void, similar to me and the universe" (67).

We can find the demiurgic void also in the Occidental vision when one asks the question: what is the creation act? "The poet in activity is a waiting" say Paul Valéry. Mallarmé spoke about "the generating power of the white sheet". And Goethe in a talk with Eckermann from 13th February 1831 confessed: "«Faust» doesn't give me peace, everyday I am in search for something new to set at it. Today I ordered to be sewed all the manuscript of the second part for to have it under my eyes like a palpable object. The place of the fourth act, which is still absent, I completed with white sheets and, without comment, what is ready finished, it temps me and encourages me to put an end to what is still unifinished. These palpable problems are more important as I thought to be, and we should come to help the intellect with various kinds of tricks".

The white sheet is a challenge for the spirit to work and a series of exterior factors stimulate the work. "It is a certain void - wrote Valéry - which demands, - calls - this can be more or less determined, - may be a certain rhythm, - a figure - contour, - a question - a state - an interval which I dispose of - an instrument, a white sheet, a surface of wall, a ground or an establishment".

"I'll compose a poem of nothing:
that is out of the question about me, nor about others,
nor about love and nor about youth
and nor about something else",

wrote Wilhem IX of Aquitania one of the first troubadours of the European literature of the Middle Ages. (68)

Once again one can see that a poem is an creatio ex nihil, similar to those divine one "it is a void figure which is in search of its content" (68), assertion that want to be in resonance with the pascalian statement "Wouldn't have looked for me if you were found me" emblematic for the phenomenon of creation.

The creation process has - in methodological point of view - two components: the inspiration - which can be isolated perfectly in this process - and the hazard, which may be "an organic deficiency, a mental or affective void, what in physiological point of view is a lack". The lacuna and the difference, the incomplete register of thought and means can constitute factors which can enrich the work. Paul Valéry shows that "... the spirit lives from difference, the leading out excites it; the lack enlightens it; the plenitude lets it inert", what represents a paradox but validated by the reality: "the few known is often more prolific, because makes you to seek, to discover and even to invent what you are in need" (69).

From Homer until Shakespeare and from this to Borges there are thousand of pages where the paradox is present in different formulae and forms. The title of the chapter to which we add these lines may become a subject for a doctor's degree thesis or for a great work. Paradox, antinomies, contradictions, opposition, absurd, void, emptiness, abyss, notions which interpenetrate or superpose - theyself are subject of literature.

Eugen Ionesco created his dramatics based on the absurd concept. "The absurd theatre" is a syntagme which refers to this great French writer of Romanian origine. The Romanian philosopher Emil Cioran grounds the entire work on an unusual capacity to face the contradictions, to tickle the dragon of paradoxes, an evident thing shown by the titles of his works: *Cartea amăgirilor* / Vanities Book (Bucharest, 1936), *Schimbarea la faţă a României* / Face change of Romania (Bucharest, 19361), *Lacrimi şi sfinţi* / Tears and saints (Buchafest, 1937), *Amurgul gândurilor* / Thoughts Twilight (Sibiu, 1940), *Îndreptar pătimaş* / Passionate Guide-Book (1940-1945, unpublished), *Precis de composition* (Paris, 1949); *Syllogismes de l'amertume* (Paris, 1952), *La tentation d'exister* (Paris, 1956), *Histoire et utopie* (Paris, 1960), *La chute dans le temps* (Paris, 1964), *Le mauvais Démiurge* (Paris, 1969), *De l'inconvénient est né* (Paris, 1973), *Écartèlement* (Paris, 1979), *Exercices d'admiration* (Paris, 1985), *Aveus et anathèmes* (Paris, 1987). The titles are not at all a poor shopwindow of what Emil Cioran knows about paradoxes. The reading of his books gave me the opportunity to note some of them: "You're *healthy* so long you believe in philosophy; when you begin to *tought* appears the disease (70). "All without God is abyss; and God is nothing but the supreme abyss (71). I had the tentation to pull out in the following from Cioran, but I confess to the reader that I forgave up, because the work of this philosopher is at a whole an "essay" from the world wisdom and every country would boast with his and every person could claim him like a representative at least in the most paradox part of his thought.

Camus wrote a famous essay about the absurd, *The Sisyphus Myth*, where we find something that all of us know till to a limit: "What I don't undestand is irrational. And the world is full of irrational things. Itself, because I don't understand its unic meaning, is only a huge irrational" (72). And Emerson wrote a book about "seven types of ambiguous expression".

Flaubert accomplished at his turn - unjustly called - " essay of stupidity in Romanesque style", Bouvard and Pécuchet. Mastered by the idea of contrast effect - manifested in the literature by passions which are not enough under control, permanently compared by the reason instance and passed "through the purifying fire of critical spirit" - the French writer propose himself to accomplish - after assiduous rummage of the libraries - a treaty of culture history. He started from a beautiful

idea and "failed" it into a famous novel where the two heros arrived not so stupid enough as the author would have wanted to be, by placing them into the frame of contrast effect, of monumental comic, consecvent with himself (Grigore Traian Pop), a work which may be a good guide for a certain type of paradox.

The Romanian linguist Sorin Stati - so far a professor at a University in Italy - wrote in an article - appeared about two decades ago in the Romanian review "Contemporanul" that an acquaintance of him "thought: to write a short story where all the phrases without exception, from beginning to the end, would be absurd". He would have called to help "the absurdities resulting from bumping words "of the kind: all the round squares have three equilateral angles; if the man is mortal the leaves are mammiferous animals; or to set up in the middle of a lake a poster with the inscription "Pedestrians! Keep your way on the opposite side". One can write a book fulfilled with paradoxes? Paul Valéry states that "the human spirit is maid because he seeks, he is magnificent because he finds" (73). This idea inspired by the works of Emile Meyerson, why it wouldn't be true in every other situation?

The paradoxism appears to try just this to accomplish. The paradox can be found everywhere into the literature genre, all over into the literary works, however the paradoxism tries to create a literary domain based on paradox. A space where the paradox is not means and an instrument, but a central theme, where the literature is active and has a scope. It is a hazard action? "If you are not wrong against the reason, in general, you can reach nothing" states Einstein. Of course into a paradox there is reason, but the writer should be present also with a drop of "maidness", to handle and to use fully the irrational zone of the world.

In *Logique du sens*, Gilles Deleuze describes 34 series of dialectic paradoxes of the becoming, of the surface effects, of the proposition, of the dualism (of the kind body / language, to eat / to speak, to work / to write), of the sense, the laying in set (the paradox of Lacan) of the esoteric words of the structure (the paradox of Lévi-Strauss), of unpredictability, of ideal game, of non-sense, of the double causality, of the singularities, of humour, of morality, of the event, of language, of rhetoric, and of ... paradox.

A kind of paradox could arise from the transfer of the relation observer / object from the uncertainty principle of Heisenberg from the physics into the literature domain, where the relation subject / object and those of object / sign could be exploited on the principle of "semiotic selfdestruction" of Pozner.

The author of this essay didn't test his literary valences yet, but with a few gift would be possible to make a cartoon in which would describe how, as following the erruption of the vulcano Pinatubo of Philipines, watched at TV by the citizens of a place town in USA, the TV screen wouldn't resist of the lava pressure and this had overflowed the flats, the streets. The terrified people would save themselves by switching the TV knobs on other chanels, where the people - on one of the chanels - take cars from parkings and try to save them, take place bumpings, blockages on the streets, other people switch the knob on a chanel where a overcharged vessel sells off shore, others switch on an airport where on a plane with aids for the Moslems of Sebrenice get on some persons among them a general of the statequarter of American Army who fought in the electronic war in Iraq. After reaching the teritory of Bosnia he accepts to works for the sake of the people agreed by the Occidental World. In short time he becomes aware that the situation regarded from the "interior" is different from those phenomenon considered in America. He begins to work at a report for Pentagon. But as the result of a bombardment accomplished by Serbs he is seriously wonded and carried by a Moslem plane in Bagdad at a hospital. Here the general is identified, and after his recovery is arrested, sent in trial of a military court and condemned to death due to his participation at the "criminal war" against Iraq. As the result of the merits as fighter from Bosnia the alternative is given to choose between his execution or the function of prezidential adviser in the American problems. In jail the officer analyses the consequences of his option in order to survive: If he would advise incorrectly Hussein, by giving favours to his home, this man would take reverse decisions against U.S.A., and in the case of a correct information - mastered by a sentiment of

culpability connected with his duty of American citizen - this man would adopt decisions capable to prejudice the interests of his country. And the picture would continue as a soap-opera, on the footprints of others, like Ewing family in Dalias.

The techniques and the means possible to be used in creating the paradox are numerous. One of them consists in the analysis of by - passing or eliminating means of paradoxes, a problem which we can't set up in the present essay and which would allow to dismantle the mechanisms of paradox and the use of analogic component parts and of mounting reverse mechanisms of paradoxes, this giving a large fan of possibilities to treat subjects for this literature speciality. Would be possible to discover methods like those of superposition of object language with the metalanguage, to exploit phenomena of feed-back type from the cybernetics, to use formula to incorporate the reading into the written text, to include the comentary into the characters dialogue or of the text, to identify the narator with the character of the story, of novel, of the general amalgameted with the novel, by passing from action to digression and all could be offered the selfreference as an artistic proceeding. The poetry doesn't jeopardize in no way the paradox in its related concepts.

The poets of haiku - those who took over the task to create a haiku belonging to home literature - are faced with the rule *fueki-ryûkô* which obliges to introduce simultaneously into micropoem the elements which express the ephemere and the eternal. The poets of the Romanian Society of Haiku offer some examples of own in this sense:

Berze în cumpeni.
Un plug își șterge rugina
de-un miez de lut
Ana Marinoiu

Storks in balances.
A plough wipes away its rust
by a pith of clay

Cum stau pe prispă
îmi odihnesc mâinile
pe Carul Mare
Iulian Dămăcuș

Laying on the porch
I repose my tired hands
on the Greater Bear

Am vrut să pipăi visul –
în palma goală
colbul stelelor
Mioara Gheorghe

Dream's sense I wanted –
in empty small of the hand
the dust of the stars

Din chipul zilei
a mai rămas doar fardul
asfințitului
Nițu Duțu

From the day's image
it left only the paint
of the twilinght

Printre fulgi de soare
zâmbetul știrb
al unui copil
Florentin Smarandache

Among sun-flakes
the toothless smile
of a child

Marea și cerul.
Aripa obosită
atinge țărmul
Ștefan Benea

The sea and the sky.
A too long travelling wing
is touching the shore

Umblă prin ere
cu nevăzută daltă:
Timpul în piatră
Țicu Valer

Walks through the epochs
with invisible chisle:
The time in the stone

O-mpuşcătură.
Pe întinsul câmpiei
eternitatea
Dumitru D. Ifrim

A short gun report.
On the expanse of the plain
the eternity

Infinit surpat –
dunga orizontului
şi-o stea de iarnă
Clelia Ifrim

Fallen down infinite –
the stripe of the horizon
and a winter star

Gară-n ars bărăgan
Ornice "Paul Garnier"
ştirbe de ace
Emil Burlacu

Halt in burnt vast plain ...
"Paul Garnier" French old clocks
deprived of their arms

Târziu, în amurg ...
Singură, o lebădă
pe luciul apei
Cristina Crăsnaru

Late in the twilight ...
Unaccompanied, a swan
on the water lustre

Plocade-n pluă
înflorind în bulboană.
Cânta zăgazul
Alexandru Rădulescu

Blankets in the mill
flourishing in the whirlpool.
The dam was singing

Mă-mbăt de soare
în poala unei dumbrăvi.
Sus, ciocârlia
Florin Vasiliu

I am drunk of sun
within the skirt of a grove.
Up, the skylark

Noapte geroasă
într-o copcă a norilor
goală, luna
Dan Doman

A night with keen frost ...
in a hole made in the clouds
naked, the full moon

In a tight connection with the above mentioned verses, we remember about the so-called paradox of poet - of Paul Valéry - in the problem of inspiration, which consists in radical change of perspective, taking place an invertion of roles; not the poet, but of contrary, the reader is the inspired person. The function of the poet is to create to the other the poetic condition. "A poet - tells Paul Valéry - can be recognized ... after the plain fact that he changes the reader into an "inspired" person. And Marius Ghica adds: "Because he doesn't find in himself the explanation of the wonderful foreseen realms, the reader seeks into the poet «the miraculous cause» of his enlightenment, confering to the creator «the transcendent merits» of the grace whom this woke up to him" (74). This phenomenon is very close to the reading paradox resulting from the competition between the finite text of the author and the infinite extension of the reader (75). Here we meet the Borges paradox, whichafter a literature differs of other one fewer by the text than by the kind in which it is read. Also to Borges belongs another paradox whichafter we, the contemporary people form our forerunners. We can't look these forerunners like they looked at their contemporary people. We take off their epoch clothes and force them to stay under the light of the electric lamps of our century, by wrapping them with clothes taken from the present wardrobe. We listen Mozart's symphonies with modern orchestras and we think as being old fashioned the clavecins of the 16th-17th centuries.

If we want to give even a single example of "paradox" in prose we might call the Great

Borges anew.

The book's paradox, as would be named by the author of these lines the chapter *The Book of Sand* from page 335 of the book with the same title, by the translatress in Romania language Cristina Hăulică, from parts taken off from the works *Prosa completa*, *El libro de los seres imaginarios and Rosa y azul* by Jorge Luis Borges. The author relates on a whole veridic fact by telling us how in a day he was visited by a stranger carying a grey suit case. He sold bibles, but the author had a few bibles, rare and expensive editions, so nothing but bibles lack him.

- I don't sell only bibles, said the stranger, and put on the table a volume bound in linen, unusaly heavy, with pages printed in two columns, similar to those of a bible, with the text in verse arangement and the pages numbered odd and untidy, here there with some little illustration. The author just examined a kind of this page when the stranger called him attention:

- Look it carefully. Do see it never anymore.

After the author determined the studied page, he closed the book, but he didn't managed to find it ever. The tome was called *The Book of Sand* for either the book nor the sand haven't beginning and end. Borges wasn't able to find nor the first page nor the last page of the book. Every times he oppened the book at the beginning or at its end he found new sheets inserted between the stub and the "first" and the "last" sheets. It was a book with infinite number of pages. Borges bought the book of the stranger, but in the first night he hadn't sleep. He got up from de bed and locked it over. But he didn't find any of the examined pages. He didn't show the treasure anybody. He was happy he owned it, but he was afraid not would be stolen by somebody. Unquiet he ceased to meet his friends and became the prisoner of the Book. He wrote in a notebook all he read in a day, because he know that the studied pages will be find never. In the night he dreamed the book. The summer passed and the tome appeared to him something monstruous, an object of nightmare, something unnatural "which infests and perversts the reality". He thought to burn it, but he fearted about the consequences. Before to retire from the National Library he set it up on the shelf with periodics and charts...

Would be **The Book of Sand** those unic book, "The History of the Spirit as producer and consumer of literature ..." (Paul Valéry, 1938) written by "a single person (who) elaborated all the book of the world(?): so great is their internal unity that no doubt all the books are conceived by the same omniscient person"(Emerson).

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* *

I have shown above that paradox is present in the literature from Homer to Shakespeare and from than to Borges. This doesn't mean that all the writers are paradoxist creators and the whole history of literature belongs to paradoxism. The paradoxism doesn't claim some writers as such and their works either. But there is really some great work which wouldn't be modern at its epoch and other post-modern for late? For in every works exists a paradox, an antology of paradoxism would take a little from every from Homer until here. That is because the literature world, the artistic creation nourished and takes nowadays too the subjects and the substance from contrasts and differences, from contraries and excesses, from opposites and lack of balances. The conciliation, tidiness, balance, uniformity, homogeneity, termination, harmony don't create great works. Even the love, in his supreme form, as a result of the harmony, if were not stressed by drama or tragic, by suffering or irrational - "Didn't be aware he wants to distroy in this way this world if put an end to discordy!" (Homer) - would fall in a story charged with platitude.

Even the novels, where love is the basic theme and the dominant note, remained in the great literature due to some tensions of the situations: the separation of characters and

the exhaust of the love exclusively by correspondence (Jean d'Agrèves), the exotism - the alien world we strive after - in which two youngers live their love in Maurice Island (Paul and Virginie) not to mention about masterpieces like Anna Karenina, Gösta Berling, Tess d'Uberville and many others, many where the tragedy, the envy, the slyness, the gelosy, the revenge, the suffering, the expiation, the purification we can encounter again and again. Johannes Volkelt sets up in his work (76) an outstanding problem. He states that "into the theories on tragedy one speak very much - and righteously - about the struggle, conflict, colision and others". He shows that a much more accent is put on the forces "against which is directed the struggle carried by the tragic character" not carrying for "the differences which come to light at these forces" but "especially the lack in balance of the tragic character ...the state of inner scission (which) confers to the internal struggle its high meaning (which) doesn't rejoice, as usual, at due attention". Or "the contradictory tangle, the tormenting depth of human nature, the ego power to spilt itself into antinomies, that remains the same ego though, can be outlined much better into the tragedy of the internal struggle". Because "The World is a will always selfdivided in its core, without reconciliation and compromise" states Iulius Bahnsen.

The paradoxism will have to live into a proper space, in order to cultivate all what the people offer as paradox. The current will have to find its own river course, based on a foundation of facts which the present essay, we hope, is arguing. There is a solid ground which this edifice of paradox is laying on; from this through a careful culture, through extraction, distilation, through analyses and syntheses, can be released ideas able to add new pages to the literature. This factuel material displayed in the above pages wants itself to be merely the start of a profound study of paradox. One can't knock at the door of this current, merely with a cry which someone would be identify with the paradoxism. Here the gift demands study, for the paradox is contradiction, is antinomy, and these make trouble to logicians and philosophers. To write for paradoxism means to know the subtle parts of the paradox. Otherwise you're else. The paradoxism is at beginning and if at present there are some new promising voices - the volume of haiku *The Silence's Bell* of the poet Florentin Smarandache is one of these works - should be kept the lath at a superior level that doesn't slip in the place where many of the new currents have let behind them only a few ruins of the language. The paradoxism has a chance from the start. It must be cultivated. We wish it long life and great works. Even it'll be a few, let be true literature!

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Content

Introduction 3

The evolution of paradox in the passage of time 8

The paradox in Antiquity 10

The paradox in Middle Ages 15

The paradox in science 17

The logic-mathematical paradoxes 24

The paradoxes of modern sciences 32

The paradox between the human being and the language 35

The paradox in Antic India 39

The paradox in the Antic China 41

The paradox in Japan 45

The paradox and the literature 49

Bibliography 59

Content 62